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NEW GREAT NORTHERN ELEVATOR AT MINNEAPOLIS.

The Great Northern Elevator A 2, which was burned at Minneapolis last spring, has been rebuilt, and we present herewith an illustration of it. Its completion adds 1,750,000 bushels to the elevator capacity of the city, which was increased by the construction and enlargement of several elevators during 1896. The elevator is built in the Great Northern freight car yards, and is surrounded by a network of side tracks. A combined cleaning and storage house, it has a cleaning capacity of 16,000 bushels an hour. It can receive 200 cars a day, and ship 200 cars a day.

The elevator is 98x338 feet, and 160 feet high. Its stone foundation was laid on hardpan. On the first floor, which is light and airy, are two receiving tracks inside, and one shipping track inside, and one track outside. Each receiving track has eight receiving sinks, the 16 sinks being arranged on opposite sides of the eight receiving legs. Also on this floor are eight cleaning or shipping legs, and 16 No. 9 Monitor Separators supplied by the Huntley Mfg. Co. There is a set of Clark Power Shovels for each sink, and the loading spouts are equipped with bifurcated loading spouts or nozzles. Two Robinson Car Pullers are provided with spools for automatically taking up the slack of the rope and thus reducing the danger to operators. One of the car pullers and the passenger elevator is operated by a 30-horse power automatic engine on the first floor.

The house has a complete dust collector plant with an automatic furnace feed. On each floor are 16 pneumatic sweepers and a suction pipe at the top and bottom of each elevator leg. A screenings conveyor and elevator takes screenings to the top of the bins, and it is dropped into one of the four screenings bins especially provided for it.

The 270 bins are 66 feet deep, and have 14-inch

discharge castings on the hopper bottoms. The cribbing used is 2x6 and 2x8 inches.

On the distributing floor are 16 Simpson and Robinson Double Jointed Distributing Spouts by which grain can be spouted to all of the bins.

On the scale floor are 16 scales with 1,400-bushel hoppers, and the weighman's office. On the garner floor are 16 garnerers of 1,400 bushels' capacity, also an office for workmen.

No spurs or gears were used, the house being

illustration. The house was designed and erected in 90 days by D. A. Robinson, elevator architect and builder of Chicago. The 5,000,000 feet of lumber used in the construction of the house was furnished by the C. A. Smith Lumber Company. The lumber was delivered at the elevator in 45 days, and put into the elevator in 30 days. The delivery was under adverse circumstances, in that there was no room for piling lumber on the ground, as the elevator is built in the midst of one of the largest

freight track systems in the Northwest. The rapidity and accuracy of the delivery can be inferred from the fact that the contractor was not delayed a day nor an hour for want of lumber, that in one period of 20 hours 500,000 feet of lumber was put into the building by the 600 workmen. The cupola of this elevator, which is 42x338 feet, and 60 feet high, was built in three days.

MINNESOTA INSPECTION FEES.

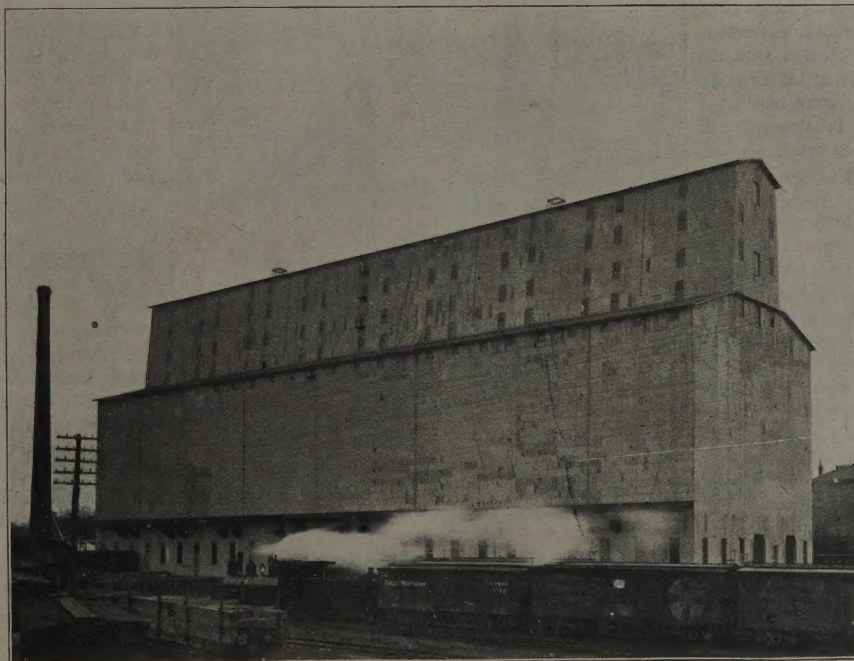
The Minnesota Board of Railroad and Warehouse Commissioners has fixed the inspection fees for the ensuing year as follows: The fees for inspection "on arrival" shall be 15 cents per carload for all receipts except flaxseed; for the latter 75 cents per carload; for inspection "out of store," 15 cents per carload to cars, and 30 cents per thousand bushels to vessels on all

grain excepting flaxseed; for the latter, 75 cents per carload to cars, and \$1 per thousand bushels to vessels.

The fees for weighing shall be 15 cents per carload, and 30 cents per thousand bushels to vessels on all grain, including flaxseed, either "on arrival" or "out of store."

The above fees are made to take effect Jan. 1, 1897, and to continue until further notice.

This, in effect, is a reduction of 10 cents per carload for the inspection, and 10 cents per carload for the weighing of grain "into store," and a reduction of 20 cents per 1,000 bushels for either inspec-



NEW GREAT NORTHERN ELEVATOR "A 2," AT MINNEAPOLIS, MINN.

equipped throughout with Robinson's system of rope drives. Power can be turned on or off each elevator head by cut-offs on the first floor.

The house is equipped with 250 incandescent electric lights, electric bells, speaking tubes, book chute and passenger elevator. A fire pump 16x8x12 is connected with an 8-inch standpipe. On each floor are 8 reels bearing 50 feet of fire hose attached to the standpipe.

The elevator is covered with galvanized iron on sides and roof supplied by the Sykes Steel Roofing Co. The fire escape on the outside of the building has a landing for each floor, as is shown in the

tion or weighing "out of store" to vessels, the fees in force previous to this change being 25 cents per carload "into store," and 50 cents per 1,000 bushels "out of store" to vessels. The fees for flax inspection were not disturbed, the expense of this particular branch of the work being greater than the income derived, even at present fees.

In taking this action the commission was governed by the intent and provisions of the grain law, which provides that the fees shall be regulated from time to time on a basis that will make the work self-supporting and no more. Under this change the fees will be lower than ever before in the history of the department.

MEETING OF THE DIRECTORS OF THE GRAIN DEALERS' NATIONAL.

The first meeting of the Board of Directors of the Grain Dealers' National Association was called to order promptly at 10 o'clock, at the New Saratoga Hotel, Chicago, Dec. 15, 1896. Those in attendance were as follows: President, E. S. Greenleaf; second vice-president, E. A. Grubbs; treasurer, J. W. Adams; secretary, W. H. Chambers, and directors, M. McFarlin, F. L. Harris, T. P. Baxter, A. E. Hartley and A. E. Clutter. This made a full attendance with the exception of First Vice-President P. S. Heacock, who was not able to attend.

The general purpose of the meeting was to outline the work that was to be done by the Association in the future, and to take action on those matters first which it seemed probable would attain results immediately.

All of the evils that beset the dealers were taken into consideration, and the methods that would have to be followed to overcome them were discussed. Some of them are of such a character that it would require a larger body to remedy them than we have at present; others were taken into closer consideration and work outlined.

Among the subjects taken into consideration were the present methods of weighing, storing, inspecting, and the methods of handling sample grain at terminal markets. The result of the discussion was the appointment of a committee of three to take up the investigation, to learn what reforms were necessary to interest the commission men and receivers in the movement, and to secure their aid in getting a better method adopted for the handling of grain in the manner spoken of than at present in vogue.

Insurance rates were thoroughly discussed, but no decided action was taken on the subject. It seemed to be the general opinion that a protest should be made to the old line companies, against the present rating of grain houses, and an effort made to secure a better rating. If this action did not meet with any favor from their hands, then the Association would try to secure for its members a lower cost, either from some of the already organized mutual companies, which are carrying mills and risks of like character, or to organize a company of its own to insure elevators only. The matter of insurance is one that is worthy of a good deal of investigation, and will receive it before any decided action is taken on this line.

A general discussion of difference between the dealers and the common carriers followed. Elevator rentals from the common carriers, reciprocal demurrage, clean bills of lading, and uniform bills of lading, unjust treatment by telephone and telegraph companies, and all other subjects that were in question in this connection were discussed. As a result of this discussion, it was thought advisable at the present time to take up the most important of these to the dealers, that of securing for the members of the Association a rental from the common carriers, for the use of their houses as grain storage depots, also for loading grain, and the work of maintaining the proper depot facilities at stations for the handling of this class of freight, which at the present time is being furnished free to the common carriers by the dealers of the country.

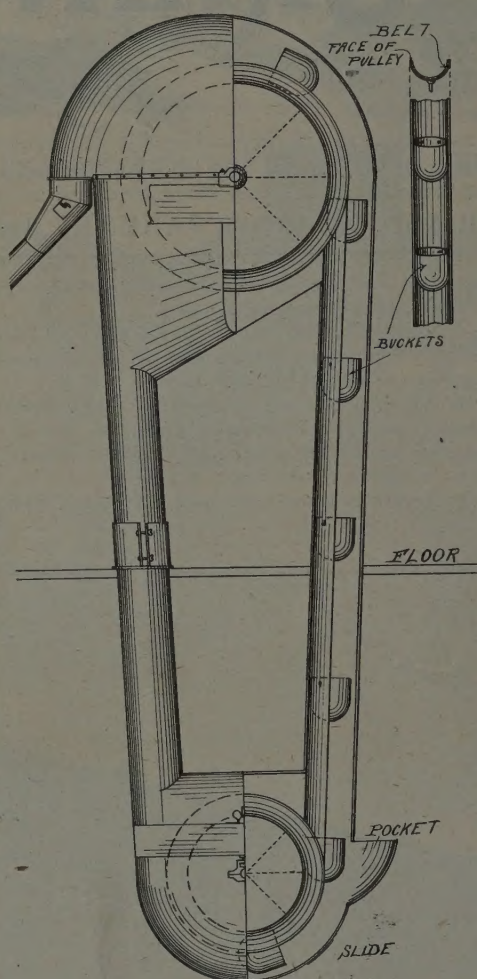
To take up this question and all others that would come up in connection with the relations of the dealer and the common carriers, and to secure an

adjustment of the same satisfactory, both to the common carriers and to the dealers, a committee of fifteen of the leading grain men of the Middle states and the Western states was appointed to take up this work actively at once, and to secure a settlement that would place legitimate dealers on a just and more profitable footing than they are at the present time. This committee's instructions are as follows:

"That a committee be appointed to secure, if possible, a compensation from common carriers, for elevator operators who furnish depot facilities to said common carriers at their stations for the receiving, storing and loading of grain for transportation over their lines."

"That the committee is hereby requested to obtain from the common carriers the sum of two cents per 100 pounds on all grain loaded through their respective houses, as compensation for said services."

The manner of conducting this work is to be a



A TUBULAR FIREPROOF ELEVATOR.

clear presentation of the matter as it exists to the carriers, asking them to give it their consideration, and to investigate the legality and the justness of the request, and if it appears to them to be in conformity with the conditions which exist, and they can allow it, to do so.

The other matters spoken of will be taken up for consideration and with the case fully laid before the carriers as seen from the standpoint of the dealers, it will place matters where they can be adjusted, if there is any injustice being placed on the shipper. It was believed that this committee would meet with a fair hearing in the matter, and that it will be able to bring the grain shippers and the railroad companies in closer touch with one another than they are at the present time.

The question of getting the grain trade to take up this work, and to help it along, came up. It was thought that every grain dealer who had any financial interest in the business ought to take an active part in the movement. If this could be done, there would be a body of from 3,000 to 5,000 dealers at the least, behind this movement. And in matters of this kind they would be able to secure a consideration of any case that they would present

asking for the amelioration of the present conditions. It was hoped that all dealers who were presented with a request to give this movement their aid would do so at once.

The creating of a board of claims, for the adjustment of perfectly just claims, that could not be adjusted at home, was talked of.

A system of tagging each car that was shipped, with the actual weight (known to be in the car, by the shipper), and a request that the same receive careful weighing at the terminals, was proposed, and will be adopted soon. If any one house continues to give short weights then the Association will make an investigation of the cause.

Other matters of importance were taken into consideration and action delayed on them until the next meeting of the Board at St. Louis, Mo.

President Greenleaf appointed the following on the Committee on Transportation provided for by the by-laws: N. A. Duff, Nebraska City, Neb.; B. A. Lockwood, Des Moines, Iowa; W. H. Suffern, Decatur, Ill.; Warren T. McCray, Kentland, Ind., and Orin Jay, St. Mary's, Ohio.

The meeting lasted two days, and was entered into by all present, with the feeling that there was at last a good chance to do something for the business of the regular dealer in grain.

W. H. CHAMBERS, Secretary.
Des Moines, Iowa.

A TUBULAR FIREPROOF ELEVATOR.

The increased fire hazard due to the elevator legs in a grain elevator has always been greatly overestimated by the stock company insurance men, and underestimated by the elevator men. The fire in its incipency creates a draft which carries the flames upward, and if the elevators are near they greatly facilitate the spread of the fire by feeding it with material in an upright position.

An elevator leg has been designed by L. C. Shroeder of Olean, N. Y., which is intended to check the spread of fire, and thus reduce the fire hazard and cost of insurance. It is tubular and made of metal, and it is claimed it will not choke up. It has no corners, and the boot and head as well as the legs are easily cleaned, so it provides no inaccessible hiding place for grain-infesting insects.

The pulleys have one groove, in which the belt travels. The buckets are round and of greater capacity than many of the buckets now used, so it is not necessary to place them so close together on the belt.

LIVERPOOL CONTRACT GRADES OF WHEAT.

Several times a year, say twice or thrice, samples are made up by the committee of the Liverpool Corn Trade Association which shall represent the quality of all wheats tenderable on contracts for future delivery in that market. These types are taken from the following several kinds of wheat, viz:

- No. 2 red winter wheat.
- No. 2 hard winter wheat.
- No. 1 northern spring wheat.
- No. 2 spring wheat.
- No. 2 hard Manitoba.

Wheat of any of these grades, up in all respects to the types prepared by the committee, irrespective of their inspection on this side of the water, are a good delivery on contracts for future delivery in Liverpool.

The heavy movement of corn to Baltimore recently was largely helped by the railroads quoting a special rate, upon the understanding that the stuff was for foreign shipment, and the grain entered the elevator warehouses pending export. It is reported that in one or two cases corn thus brought in was sold for local consumption under unconditional warehouse receipts. The railroads refused to deliver the corn unless paid the additional freight rate appertaining to grain for sale locally. To prevent the recurrence of any sales under similar conditions, the railroads now protect their contracts by stamping the warehouse certificates "for export only."—Baltimore Journal of Commerce.

GRAIN HANDLING FACILITIES OF NEW ORLEANS.

In response to various complaints from members of the Illinois Grain Dealers' Association, regarding shipments to New Orleans, the President of the organization, Mr. John Crocker, appointed a committee, consisting of D. H. Curry, Thomas Costello and A. J. Montgomery, to investigate the facilities for handling, and the inspection and weighing of grain at the port of New Orleans. The committee reported as follows:

To the Honorable President and Members of the Illinois Grain Dealers' Association.

Gentlemen:—After making a careful investigation, your committee begs leave to make the following report.

First—The facilities for handling grain by the Illinois Central Railroad at New Orleans, previous to the erection of the new elevator at Stuyvesant docks, were limited to the two elevators "A" and "B" at Southport, with a storage capacity of 500,000 bushels, and what is known as elevator "C," used exclusively for city trade, with a capacity of 250,000 bushels. The rapid handling of grain through these elevators was limited to a certain extent by their inability to load in and out at the same time; the unloading into the elevators from the cars being done at night, and from the elevators into the ships in the daytime. These elevators had a handling capacity of 100,000 bushels in, and 150,000 bushels out daily. During the rush of grain last summer, it was impossible to take care of all of it at the Southport elevators, in consequence of which a portion was transferred and handled through elevators owned and controlled by outside parties.

The situation to-day has greatly improved, the capacity being practically tripled, due to the construction of the Illinois Central's new elevator, "D," at Stuyvesant Docks, with a storage capacity of 1,000,000 bushels, and a daily handling capacity of 300,000 bushels in, and 350,000 bushels out. The arrangement of this elevator enables grain to be loaded in and out at the same time.

The employment by the Illinois Central Railroad of John C. Fears as superintendent of the Central Elevator System of New Orleans, and who will be responsible for the proper handling of grain at that port, will prove of great benefit to the shipper. He is a man of large experience, who thoroughly understands his business, and whose duty it will be to protect the shippers, as well as the exporters, and to whom the shippers, in the future, will state their grievances. With the increased storage room afforded by the new elevator, making a total in all of 1,850,000 bushels, it is believed that the Illinois Central Railroad will be fully able to handle promptly all business that may be tendered to it for export.

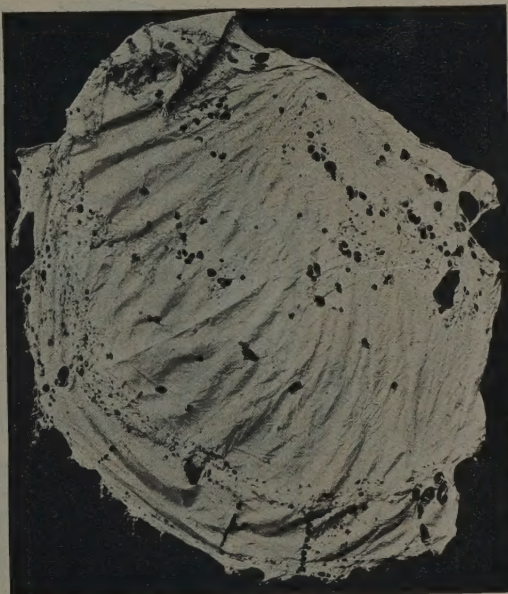
While the above storage capacity is small as compared with that of northern grain markets, it should be remembered that New Orleans is not a storage point, but that it is the aim and intention of the company to keep the grain moving; loading it out as fast as ocean tonnage is furnished. At the present time more vessels are waiting for cargoes than there is grain to load them.

Second—The inspection, at New Orleans, is practically the same as that of St. Louis. The chief inspector, Robert McMillan, is appointed by the New Orleans Board of Trade, and bonded in the sum of \$10,000, with three assistants, bonded in the sum of \$5,000 each. Your committee followed the work of the inspector on one day's receipts and found the inspection to be reasonably fair and impartial. Out of 120 cars, 89 cars graded No. 2, 27 cars, some of which was new, graded No. 3, and four cars graded No. 4.

The only exception taken to the inspection was a car of corn, graded No. 3, which was mixed considerably with oats, otherwise the grade would have been No. 2. In this case your committee maintained that all such grain should be sent to the elevator and cleaned, the shipper bearing the shrinkage and expense of cleaning, and the corn then graded to apply on contract. We did this for the following reasons: First, New Orleans, with its constantly increasing export trade, is unfortunate in having no

industries which furnish a market for low grades of corn, consequently this grain must be disposed of in the local markets for what it will bring. Second, the Illinois Central makes a special export rate, but if the corn is disposed of in the local market it must take the local rate, thereby adding another loss to the shipper, hence we insist that corn which could be raised to contract by cleaning should be so, that the shipper could have the benefit of the same. To this end a conference was arranged with the Board of Trade, at which the principal exporters of New Orleans, or their representatives, were present. The meeting was of an informal nature, and questions of interest to both shippers and exporters were discussed. The exporters readily consented to give the shipper the advantage of making his grain contract by cleaning, provided he stood the cost of cleaning, which, it was estimated, would amount to about one-half cent per bushel, in addition to the shrinkage. And the Board of Trade authorized the inspector to raise grade of grain which may be cleaned in this manner.

Since your committee returned, its attention has been called to ten cars of corn, which graded No. 4, but which was raised to No. 3, by rehandling through elevator "D," under the supervision of Mr. Fears,



FABRIC MADE BY INDIAN MEAL MOTH.

the cost of same to shipper amounting to only one-half cent per bushel. The per cent. of corn that is sound, but graded No. 4, or rejected, on account of being dirty or mixed with other grain, is very small. These low grades are principally the result of shipping corn which is unfit for export, and for this the shipper only is to blame.

Our attention was called to one car of corn which was green, soft and hot, and would have inspected no grade in any market. If corn is sound, dry, and loaded in a car that does not leak, or if in a fruit car, with ventilated doors all closed, the shipper need have no fears of the climate getting such corn out of order; but if the corn is green, wet, full of ice or snow, the wise dealer will seek a market for it elsewhere.

Third—The present system of weighing, as inaugurated by Superintendent Fears, is all that could be desired in the way of pains-taking care and accuracy. The scales in the new elevator have been carefully tested, and competent foremen and licensed weighers are in charge of them. The same is true of the other elevators of the Illinois Central system.

The principal complaints of shortage seem to have occurred at the time the Illinois Central, in order to prevent a blockade, arranged to handle the surplus grain in outside elevators, owned by other parties, and as the New Orleans Board of Trade is making a thorough investigation, and further with the present enlarged facilities, it is not likely a repetition will occur, your committee deemed an investigation of these unnecessary.

Many of the shortages are undoubtedly due to lack

of care on the part of the shipper in cooping the car and properly bracing the grain doors. A small crack in the door, that would be hardly noticeable, may permit several bushels to leak out on the car's long journey southward, and still show little evidence of leaking on its arrival there. Grain doors should be thoroughly strengthened, or better still, doubled, and all the cracks covered on the inside with lath. The suggestion was made by your committee and approved by Mr. Fears, that where shippers used hopper scale, they should place a good sized card in the car, either tacked to the upper part of each grain door, or to lath and placed in the middle of the car, giving the shipper's weight, his name and address. Then if there is any serious discrepancy in weights, the superintendent's attention would be called to it, the weights and condition of car investigated, and a record made of same.

In conclusion, we believe that with the improved facilities, and under the systematic management of Mr. Fears, that the interest of the shippers will be taken care of at New Orleans, as well as in any other market. The Illinois Central Railroad Company recognizes the fact that if the shipper's interests are not cared for at that port, his grain will not go that way, and the company is only looking after its own welfare when it sees that the shippers receive fair treatment. The exporter also realizes that if the grading is unfair, thereby causing loss to the shipper, he will have to pay more to induce corn to go to that port, hence we believe that if the shipper is careful in sending only sound, dry corn, and takes the precaution to see that his cars are in good condition, the results will be satisfactory.

SILK WEAVING INSECTS IN GRAIN.

BY PROF. W. G. JOHNSON, COLLEGE PARK, MD.

I referred in the April and October numbers to the peculiar silk fabric made by insect larvae, and presented an illustration of a Mexican granary, in which the fabric was found. In my first article I said I was of the opinion that this silken material was the product of the Indian meal moth, *Plodia interpunctella*, but that the insect had not been definitely connected with it. I solicited more material from readers, and in response, have received the following letter from an Ohio firm: "We have read your article relative to a fabric made by the meal worm in Mexico. We send you by this mail [October 6] a sample of a similar construction, also specimens of the worm that makes it, which we trust reaches you safely. This fabric was made on a barrel of hominy corn that had been stored for a year or more in a wholesale grocery store. You will find both live and dead worms in the material. Please let us know if it is the same thing you speak of in your communication. We think it the common meal worm."

The piece of silk is a beautiful, delicate texture, about half the size of the head of an ordinary flour barrel, as shown in the accompanying illustration. It has been perforated more or less, and there are many remnants of old cocoons around the edge where the material was attached to the barrel. The silk is identical, though much whiter, due probably to the fact that it was found in a better protected place than the Mexican fabric. There is little or no doubt that the larvae that accompanied it are those of the Indian meal moth. Several of them were living when they reached me. They have been placed in a breeding cage, and I hope to rear the adult moth.

The county attorney of Phillips County, Kansas, is settling up the seed grain notes given by farmers in 1895, and he reports that while collections are somewhat slow, he is meeting with success.

The following notice is published conspicuously in several Kansas country newspapers, and referred to editorially: "Corn is legal tender. We have a large amount due on subscription. We will allow 20 cents a bushel for corn on both old and new subscription. Bring on your corn." One paper in Northern Kansas has been forced to build several cribs as a result of this notice.

DON'TS FOR OWNERS OF INSURED ELEVATORS.

Don't forget to read your policy.

Don't forget that it is a contract—an instrument quite as important as a deed, a mortgage, or a will.

Don't forget that you are a party to the contract, and that every word in it means what it says.

Don't forget that in many states—and quite likely yours is one of them—the insurance company has no voice as to what the contract shall contain; the state makes it, and compels insurer and insured to use it.

Don't imagine that in case of loss an insurance policy is equivalent to a sight draft on the company issuing it for its face.

Don't forget that it only agrees to pay the actual cash value of the property destroyed at the time of the fire, to an amount not exceeding its face.

Don't forget that proof of this actual cash value must be made, under oath, as provided for in the policy.

Don't forget that in arriving at this actual cash value, due account must be taken of any depreciation in the property, however caused.

Don't forget that the new cost of elevator machinery has been materially reduced in the last few years, and when from present new cost is deducted the difference in value between a new modern plant and the old one burned, the actual cash value is likely to be much below the original cost.

Don't forget that an application for insurance is, by the terms of the policy, made a part of the contract, and is a warranty on your part. Therefore see that the statements made are strictly in accord with the facts, and any promises made are faithfully performed.

Don't forget that you, and not the company, are responsible for the way your insurance is placed. If your policy does not cover where and how you desire it, it should be changed now. It will be too late after a loss occurs.

Don't claim, after a fire occurs, that "the inspector knew how you wanted the insurance to cover, and you supposed it was all right." The policy is in your possession, and is presumed to be exactly as you want it, until it is sent in and ordered changed, and a loss under it will be adjusted as it reads. What you may have told an inspector, or supposed was a fact, will cut no figure unless incorporated in the policy. The inspector's business is to look after the fire hazard in and about your plant; not to dictate the management of your business.

Don't make the mistake of allowing personal or other damaged property to go to waste while waiting for an adjuster. Read your policy, and be governed by it; it may save you money.

Don't foolishly make a claim for twice your actual loss, on the theory that the "insurance companies will cut you down anyhow." Insurance companies want to pay 100 cents for every dollar of honest loss, and nothing throws suspicion on the honesty of a loss like an excessive and unreasonable claim.

Don't assume that the company sends an adjuster for the purpose of robbing you; that is not his business. He goes to assist you in making up your proofs according to the terms of the policy, and frank, open treatment on your part will make this work easy and pleasant, while concealment and attempts at overreaching will very likely cause delay and trouble, for all adjusters are human, and very few of them fools.

Don't be led to believe that anything herein contained is new, or peculiar to any particular company. The facts which underlie the suggestions are as old as insurance, and apply to all companies everywhere.

Don't get the impression that anything contained herein is a reflection on your honesty or your business capacity, for nothing could be farther from the truth. It is for the purpose of making you an exception to the almost universal rule, that in nothing is the average business man so careless as in the important matter of his insurance.

Don't fail to remember that the need of something like the foregoing, to impress upon policyholders the necessity for a more thorough understanding of the insurance contract, is suggested by an experience of many years. Every word is intended for your

personal benefit, and is worthy of your consideration.

BARNARD'S IMPROVED OAT CLIPPER.

The lightness of the last crop of oats has given the cleaning house man an excellent opportunity to ply his trade with profit and naturally the demand for oat clippers has been good.

The clipper illustrated herewith has been improved in several parts, and its capacity and efficiency greatly increased. The machine is called Barnard's New Horizontal Adjustable Oat Clipper. It is designed especially for this purpose, and is equipped with two sieves for cleaning the oats before they are sent to the clipping jacket. The first sieve removes straws and large pieces of dirt; the second has small round perforations and is designed to remove mustard seed and other small particles of foreign matter.

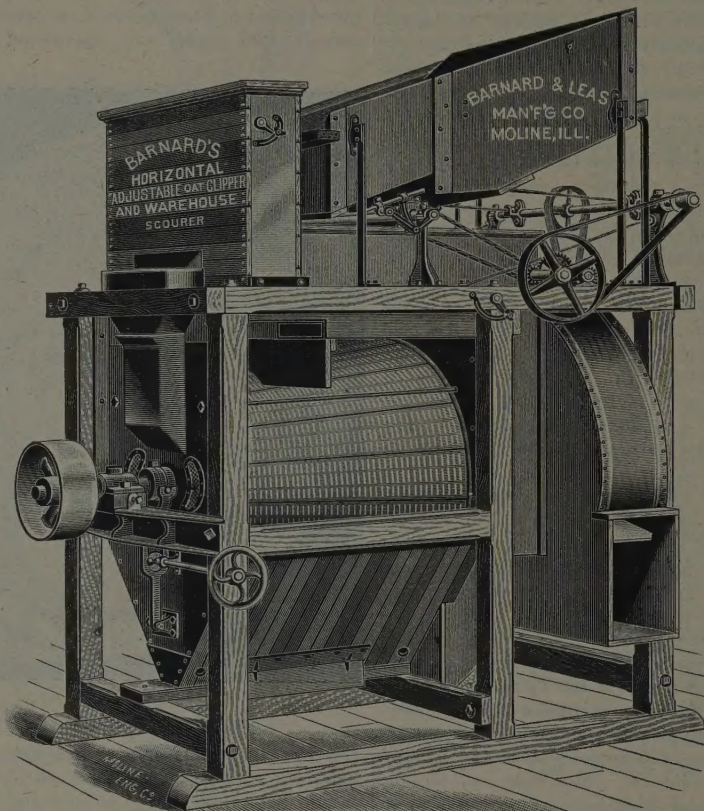
The second sieve is equipped with a series of brushes with reciprocating movement over the bot-

tom of it, covering the entire bottom twice every movement. They keep the perforations clear, preventing clogging, and increase the capacity. These brushes have a positive movement independent of the shaker motion of the sieve. These brushes are made adjustable to take up the wear of the bristles, and when necessary can be removed and replaced with new ones. The manufacturers consider this application of the brush the simplest and best ever devised for this purpose. The sieve surface has been enlarged 25 per cent., and the capacity greatly increased. The oats are delivered from the shoe into the first separating trunk, which removes many light impurities, and thence direct to the clipping case, which has also been improved by changing the inside surface of the jacket, so that the oats can be clipped closer than before, and the machine's efficiency is greatly increased. The adjustments are accessible, so that the operator can easily adjust the clipper while it is running, to clip light or hard. He can thus make his oats weigh more and raise their grade as he desires.

After the oats are clipped as desired they are discharged into the second or last separating trunk and subjected to an air blast which removes the hulls or clippings and other light material. The clipped oats, bright and clean, are dropped out through the bottom of the separating trunk. The light dust and clippings, which are blown out through the openings in the clipping jacket, are separated by gravity, the light being drawn into the fan and discharged out of doors, and the heavier being discharged under the clipping case.

The machine is well built, strong and durable. It is light running and can be driven from either end. The clipping jacket is conical in shape, and is made of either iron or steel, and the revolving cylinder is of iron and also conical and firmly keyed on the shaft. The shaft is heavy and runs in two self-adjusting, self-oiling boxes, which never heat, but are in plain view, so meet with the approval of the insurance inspectors. This shaft carrying the revolving beaters is made adjustable while running. The device for this purpose is very simple and effective as well as easy of access. The machine can be adjusted to a nicety in a few moments' time, while in motion.

The machine is made in three different sizes, and will clip from 300 to 500 bushels of oats an hour, according to size of machine. It is also adapted for scouring wheat and barley. It brightens the berry,



BARNARD'S IMPROVED OAT CLIPPER.

increases the weight, and raises the grade. It scours barley just enough to brighten the berry without injuring the germ.

The manufacturers of this machine are the Barnard & Leas Mfg. Co. of Moline, Ill., whose name is a guarantee of mechanical excellence, and who sell the machine under guarantee of satisfaction with time for trial. They invite correspondence from interested parties.

MISSOURI WEIGHING FEES REDUCED:

The Missouri Railroad and Warehouse Commission on January 1 reduced the charge for weighing grain in that state in carloads, in and out, from 35 to 25 cents per car, and for weighing grain in and out of barges and boats be reduced from 35 cents per 1,000 bushels to 30 cents per 1,000 bushels.

No change has been made in the inspection fees, which, at 40 cents per car, as now, are considered high. It is understood, however, that a corresponding reduction will be made for inspection as soon as the grain handled will justify it.

Begin the new year right; join the Grain Dealers' National Association.

BLEACHING OATS WITH SULPHUR.

Considerable interest has been aroused over the discovery that oats bleached with sulphur have been handled in the Chicago market. It is claimed to be against the law of the state to use such a process, but the poor quality of the present oats crop has proved too great a temptation to mixers, who have brightened up oats with sulphur to help out poor lots. The fact became generally known when the insurance inspectors made a complaint to two or three concerns, and raised the insurance on their elevators. Later all the large concerns handling oats were questioned as to whether they were using sulphur. Most of them denied it emphatically.

For some time there has been a great deal of mystery about the practice and reports of investigation by the Board of Trade have frequently been circulated. A majority of receivers are free in their denunciation of the practice, and say that no reputable house would resort to it. There are others who say that the law originally had reference to barley, and that the only possible damage to grain is in destroying its germinating power. They say that oats are not made unwholesome for human or animal consumption, and that no one is hurt by the practice of bleaching, while a large quantity of otherwise unmarketable grain is made merchantable. The statute reads as follows:

"Be it enacted by the people of the state of Illinois, that no person shall subject, or cause to be subjected, any barley, wheat, or other grain to fumigation by sulphur or other material or to any chemical or coloring process whereby the color, quality, or germ of such grain is affected.

"No person shall offer for sale or procure to be sold any barley, wheat, or other grain which shall have been subjected to such fumigation or other process, knowing such barley, wheat, or other grain to have been so subjected.

"Any person violating the provisions of this act shall, upon conviction, be punished by fine of not less than \$100, or more than \$1,000, and imprisonment not exceeding three months in the county jail, and shall be liable also for all damages sustained by any person injured by such violation."

Why there should be such vigorous opposition to the bleaching of oats is not clear. That the quality is improved is evidenced by the fact that the bleached oats bring a better price in the market, and subjecting the grain to sulphur fumes does not injure the food value or diminish its power to germinate. The dealers who thought they were getting oats that had never been stained are disgruntled principally because they were deceived, not because they think they were cheated. The practice has long been followed in Great Britain, but more attention has been given to the bleaching of wheat than oats.

A patent was recently granted by the British Patent Office for an apparatus for bleaching wheat and killing insects, which is illustrated herewith. Bleaching, it seems, is practiced to some extent in the United Kingdom. Engineering says: "Hitherto the bleaching or whitening of grain has generally been effected by means of sulphurous acid gas either on a common flat kiln, or on a perforated zinc floor under which sulphur is burned, both these methods requiring manual labor to load and unload the floors, during which loading and unloading the workmen are liable to inhale sulphurous acid gas."

In this invention the sulphur is burned in an iron tray, to which it is advantageously fed by a hopper, and the sulphurous acid gas formed is carried by a pipe to a fan which blows it one or more times through a descending column of grain. This kills all weevil, grain infesting insects, molds and microbes, and is said to improve the appearance and keeping quality of the cereal.

In the fire chamber A, outside the building in which the sulphur is burned, is a hopper b, which is provided with means of regulating the quantity of sulphur fed to the pan c, where it is burned. The pipe d leading from the fire chamber conveys the sulphurous gas formed by combustion to the fan d', which forces the gas or fumes into the lower sul-

phurous acid box e, and through the louvers forming its sides into the passage ways where it comes in contact with the grain as it drops from above.

The gas then passes through the louvers forming the sides of the large chamber and into the passages leading to the pipes h, h, which conduct the gas to the upper box i. From there it passes through the sides to the falling grain and out to the passages leading to the escape pipe k.

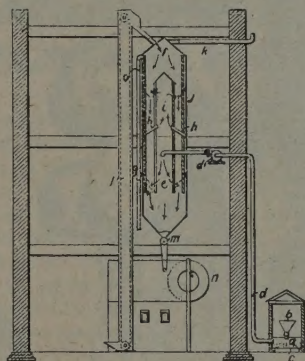
The grain is elevated to the top of the chamber. As the grain leaves the chamber it is treated by the polisher m, and the fan n. In case the chamber becomes too full the surplus falls out the overflow valve o. The grain box f is kept nearly full when the apparatus is at work. The full line arrows indicate the direction in which the grain falls, and the dotted line arrows show the path taken by the sulphurous acid gas.

THE IOWA GRAIN SHIPPERS' MUTUAL.

The Grain Shippers' Association of Northwest Iowa has at last incorporated a company, or rather an association, to insure the business property of the grain shippers of the state. The articles of incorporation of the Grain Shippers' Mutual Fire Insurance Association are as follows:

This Association is organized under Section 1160 of the Code of Iowa, Title IX, Chapter II.

Article 1. The name and style of this Association shall be the Grain Shippers' Mutual Fire In-



A BRITISH APPARATUS FOR BLEACHING GRAIN.

surance Association, and its principal place of business shall be Ida Grove, in Ida Grove, Iowa.

Art. 2. The business of this Association is to be carried on in the state of Iowa, and the private property of members hereof shall be exempt from debts of the Association, except as especially provided in the articles of incorporation. The object of this Association is to mutually insure its members against loss or damage from fire or lightning on elevators, warehouses, granaries and cribs, and grains and seeds stored therein, machinery in elevators, including boilers, engines, cleaning machinery, and all other machinery of any and all kinds whatsoever ordinarily used in elevators, also grain offices and scales. This Association assumes all the rights, powers and privileges that are now or may be hereafter conferred upon similar associations. It may sue, and be sued, and may have a common seal.

Art. 3. This Association shall continue for the period of twenty years from the date of the adoption of these articles unless sooner dissolved by a majority vote of the members present at a regular meeting, or at a meeting regularly called for that purpose.

Art. 4. Any person or his personal representative or assignee when his assignment is approved by the Secretary, having property insured in this Association, is a member hereof, and as such member shall be entitled to all the rights of such membership, and shall be entitled to one vote at all meetings of the Association, but no member shall be entitled to vote who is in arrears in his assessments.

Art. 5. The management of the business affairs of this Association, and the exercise of its corporate authority, shall be conducted by a board of nine directors, who shall be elected by ballot at the annual meeting, which shall be held annually on the third Tuesday in July of each year, of which meeting due notice shall be given to each member of the Association by the Secretary. The terms of office of the said director shall be so arranged that the terms of one-third of the said directors shall expire each year, and for the purpose of this organization E. J. Edmonds, E. M. Parsons, E. M. Cassidy, J. A. Keenan, E. A. Abbott, August Petersmeyer, F. G. Butler, Geo. O. Holbrook and F. D. Babcock shall

serve as directors until their successors are elected and qualified.

Art. 6. The Board of Directors shall elect annually from among their own number a president, vice-president, secretary and treasurer, to serve for one year, whose duties shall be those usually devolving upon such officers, and for the purpose of this organization the following named persons shall be the officers of this Association to serve until their successors are elected and fully qualified, to wit: E. J. Edmonds, president; E. M. Parsons, vice-president; F. D. Babcock, secretary; J. A. Keenan, treasurer. The president, secretary and treasurer, together with two directors selected by the Board of Directors from among their own number, shall comprise the Executive Committee.

Art. 7. The secretary and treasurer shall each give bonds in the amount to be fixed by the Executive Committee to be approved by such committee, and the president of the Association shall be the custodian thereof.

Art. 8. The Executive Committee shall have power to prescribe the plan of insurance and the necessary rules for the management of the Association.

Art. 9. The Board of Directors shall have authority to formulate and adopt by-laws for the government of this Association, and such by-laws when regularly adopted shall be a part of the contract of membership of each member, and all of his rights as a member, under and by virtue of the certificate of membership and policy of insurance or otherwise, shall be limited by and subject to such rules and by-laws as may be provided by the Executive Committee and Board of Directors, whether the same are adopted before or after his certificate of membership or policy of insurance is issued.

Art. 10. The Executive Committee shall audit all accounts, and adjust all losses, and shall order all assessments, and may create a surplus not to exceed five thousand (\$5,000) dollars, said fund to be created by setting apart the surplus of admission fees and dues not required for current expenses, and 10 per cent. of the amount realized from each assessment made to pay losses. This surplus when so created may from time to time be used in payment of losses.

Art. 11. Any member wishing to withdraw from this Association shall notify the Secretary in writing, and return his policy or certificate of insurance, and if there is no loss pending, and all of his assessments paid, the withdrawal shall take place at once. But if there has been a loss prior to the receipt of the notice of withdrawal, and it is necessary to levy an assessment to meet the same, he must pay such assessment before the withdrawal takes effect. A member shall be liable only for his assessments as provided by the articles of incorporation and by-laws.

Art. 12. The Association shall be liable to the assured, in case of loss, only for the net proceeds of one assessment against the members of the Association as in the articles of incorporation provided, not to exceed the amount of insurance named in his policy or certificate of insurance. And all persons becoming members of this Association or accepting insurance herein do hereby especially agree to all the terms and provisions of the articles of incorporation and by-laws, and that all liability of the Association or any of its members shall be strictly limited as in the articles of incorporation provided, and in the by-laws. The private property of any member of this Association shall not be liable for debts incurred by this Association, except as herein provided, nor shall his liability extend in any manner so as to include the unpaid assessments or obligations of any of his fellow members. The total liability of a member shall be limited to one assessment for any one loss.

Art. 13. The false statement of any material fact in the application for insurance shall operate to forfeit and render void the policy or certificate of insurance issued thereunder.

Art. 14. This Association shall commence business, and the liability to policy-holders or holders of certificates of insurance begin when the policies or certificates of insurance issued to members amount to one hundred thousand (\$100,000) dollars.

Art. 15. These articles may be amended by a two-thirds vote of the members present at any regular meeting, providing notice of the proposed amendment has been given at the previous meeting, or duly set out in the regular call for such meeting.

Witness our hands as incorporators this 16th day of December, 1896.

E. J. Edmonds,	August Petersmeyer,
E. M. Parsons,	F. G. Butler,
E. M. Cassidy,	Geo. O. Holbrook,
J. A. Keenan,	F. D. Babcock,
E. A. Abbott,	

Secretary Babcock writes that many applications for insurance are being received, and that it will be but a short time until the Association will have the first \$100,000 required to write insurance.

Secretary Chambers of the Grain Dealers' National Association has moved to Des Moines, Iowa.

CHANGES RECOMMENDED FOR KANSAS INSPECTION LAW.

Attorney General F. B. Dawes, in a report recently submitted to Governor Morrell of Kansas, severely criticises the grain inspection laws of that state. He makes the recommendation that the control over deputies be taken from local boards of trade and vested in the head of the department.

As the law now is, the inspector is powerless either to appoint or remove one of his deputies. The right is vested in the Board of Trade at any locality to name a deputy inspector for that section, and the inspector has to make the appointment. In cases of incompetency or worse, the only recourse of the state inspector is to appeal to the Board of Trade, and it may act upon his suggestion or not, the matter being entirely optional.

Mr. Dawes' report to the governor contains a recommendation that the law be so changed as to remedy this evil. He suggests the inspector should either be given some authority, or the state should cease making a pretense of exercising control. He says in this connection:

"Several times within the last year I have been called upon by the state grain inspector to assist him in his efforts to discharge some of his deputies. Complaints of incompetency having been made to him, and he having investigated the charges and being convinced that some of his deputies were either incompetent or worse, he was seeking to have them discharged. He notified the parties to vacate, but they refused. He appealed to the Board of Trade of Argentine and asked it to take action, but it refused and stubbornly persisted in holding in place a deputy inspector who, in the opinion of the inspector, was wholly unfit for the position. This led me to a careful investigation of our statutes in regard to the state inspection of grain, and the powers of the state authorities in relation thereto.

"Section 22 of Chapter 248, session laws of 1891, provides for the appointment of a state grain inspector. Section 23 of said act reads as follows, to wit: 'Section 23. Every Board of Trade issuing license under the provisions of this act shall nominate, to be appointed by the state inspector, such number of deputy inspectors of grain in that vicinity.'

"It will be noticed that, by the provisions of this section, here is a state officer who is made responsible to the people for the faithful performance of his duties and the faithful execution of the law, and yet shorn of all power to select the very men who, of necessity, must do the major part of the work. Just think of it for a moment; a state officer without power to appoint his own deputies, but who must, at all times, appoint whoever may be recommended by a Board of Trade! Why ask the inspector to appoint, when he is shorn of all authority to say who shall be appointed?

"Section 27 provides how a deputy may be removed, and such section reads as follows, to wit: 'Section 27. Upon complaint of any person in writing to the Board of Trade appointing the officers hereinafter named, supported by reasonable and satisfactory proof that any deputy inspector, weighmaster or assistant weighmaster has violated any of the rules prescribed for his government, or has been found guilty of improper official acts or conduct, or has been found inefficient or incompetent for the duties of his position, such officer shall be, by said Board of Trade, immediately removed from office,' etc.

"It will be noticed that not only is the inspector shorn of his power to select his deputies, but if one proves unfaithful, the statute gives him no power to remove him. He must go to a private corporation and say: 'Please remove this public officer,' and if the private corporation refuses, under this statute the state inspector must quietly fold his hands and permit the incompetent or venal officer, as the case may be, to go on using his name and the name of the state as an officer of the state, no matter how corrupt, incompetent or venal he may be. This statute should be amended so as to give the state some authority to control its inspectors, or the state should go out of the inspection business. The statute should not pretend to the unsuspecting

public that it controls something, when that something is under the control of a few individuals banded together as a private corporation or company."

SMUT.

To Secretary F. D. Coburn of the Kansas State Board of Agriculture we are indebted for illustration shown herewith taken from the Board's Tenth Biennial Report, in which Prof. Plumb is credited with saying that "smut as seen by the farmer is either a distorted, greenish-white piece of vegetable tissue, or a mass of black, greasy powder, which generally appears breaking out from an ear of corn or from the leaf or stalk when green or succulent. The source is a simple, tubular, minute plant, too small to be seen by the naked eye, which grows in the tissues of the corn plant and feeds upon its juice. These little plants, of which there are vast numbers, branch out in tubular form when they find a spot in the corn plant that is especially nourishing. Then, inside these tubes, minute bodies termed spores (seeds) develop, and finally the spot becomes a mass of these, and then all of the little plants excepting the spores wither away. The dark colored, loose smut is mostly the mass of spores, of which



SMUT ON CORN.

there are countless numbers. A single cubic inch of them would contain over 15 billions. The top of a pin-head that has been moistened will bear from 30,000 to 50,000. These spores are really seeds, and if the right degree of moisture is applied they germinate in a few hours and produce very minute, thread-like plants, from which soon develop sporidia. The wind may blow these latter upon a young corn plant, in which case they may grow into its vegetable flesh and develop to a remarkable degree, and eventually break out in the common form of smut. This disease is distributed through the agency of the smut, and the more the spores are scattered about the more prevalent it may become. It is abundant all over the United States and in the corn-growing parts of Europe. While considerable damage may occur from this fungus, the extent of this is not generally appreciated by corn growers.

"Smut is generally thought to be injurious to live stock, yet but little satisfactory evidence is at hand to prove that such is the case, as it is commonly eaten. But three experiments on this point have come to the writer's knowledge. Doctor Gamgee for three weeks fed two healthy cows on smut, wet and dry. The wet did no harm, but a loss in weight followed the eating of the dry. The animals had voracious appetites, were fed three times a day, and ate from 3 to 12 ounces at a dose. In three weeks they ate 42 pounds of smut. Professor Henry of the Wisconsin station performed a similar experiment on two cows. One cow ate as much as 32 ounces of smut in one day, and the other up to 64 ounces. The latter cow died suddenly the next day

after eating a large amount of smut. Professor Henry attributes her death to having eaten this, which is not strange. In making a post-mortem examination no serious derangement was found in the intestines, but Professor Henry thinks the brain was affected. He says: 'Corn carrying smut on the ears occasionally and on the stalks very frequently has been fed on almost every farm in the corn district without fatalities resulting, so far as we can ascribe to the fungus or smut. It is barely possible that the smut fungus at times may become virulent and dangerous to the health of the animal, but surely its general prevalence shows that such a change in character is very rare. I have frequently been consulted by parties asking whether they dare feed smutted grain, and have always recommended its use in limited quantities, urging that the animals eating such injured grain be closely watched and the feed changed if evil symptoms appear. I have always asked for reports if anything wrong happened, and have never yet received an unfavorable report.'

ORDERS JUST TREATMENT FOR ELEVATOR MEN.

It is decidedly gratifying to learn that there is one railway superintendent in the West who has some idea of a railroad company's obligation to the man who erects a freight depot for bulk grain, keeps it open and loads grain into cars free of charge to the company.

One superintendent who recognized this obligation, and also the unjust treatment of country elevator men in the distribution of cars issued the following order to the agents of the company:

"The State Board of Transportation of Nebraska has decided that: A railroad company is under no obligations to provide a car to anyone upon the mere statement, 'I'm going to buy 600 bushels of corn on the market. Get me a car in which I may load it as I buy it,' but as soon as the person has got the corn on hand, in sight, and tenders it for transportation, then begins the obligation on the part of the company to provide means for transporting it.

"It has also decided that: Whenever, by reason of unusual circumstances, freights have accumulated to an exceptional extent, and are then offered in extraordinary quantities, the company fulfills its obligations to the public by furnishing cars ratably and fairly to all shippers, in proportion to the freights tendered respectively.

"From the above you will see that it will be proper to furnish empty cars to dealers who have grain stored in elevators ready for immediate shipment, in preference to 'track buyers' who have not the grain in sight to tender, by carload, for immediate loading at the time they order empty cars. Please be governed accordingly."

Unfortunately the conduct of this road stands in sharp contrast with that of many other roads, which turn a deaf ear to the pleading of the elevator man with a full house, and supply cars to irregular dealers, farmers and others who load direct from wagons to car, delay the cars and thereby help to increase the scarcity of cars. A little organized work on the part of the country elevator men would secure similar treatment for all of them.

LANDLORD KNEW TENANT WAS SELLING CROP.

From a daily paper of Council Bluffs, Iowa, we learn that Judge Green, in the District Court, recently tried the case of John H. Dollen, against Dowe & Co. The parties live in the eastern end of the county, Dowe & Co. being a firm of grain buyers in Neola. Dollen owns a farm which was rented. His tenant sold the crop to Dowe & Co., receiving cash for it, and afterward Dollen demanded pay a second time from Dowe & Co., claiming that the crop was sold without his consent, and that he had a landlord's lien upon it.

Dowe & Co. showed that Dollen knew that the crop was being hauled away and sold, and placed the tenant on the stand to prove that the sale was made with Dollen's consent. The jury brought in a verdict, finding for the defendant.

The members of the grain trade are slowly but surely becoming aroused to the needs of reform, and to the advantages to be gained by organization.

SIZES OF FREIGHT CARS.

One of the most perplexing problems for the satisfactory and final solution of which both railroad companies and freight shippers are desirous is that in regard to the size of cars and of the minimum weight regulations. The minimum weight clause in the lumber tariffs is, under the circumstances, an essential safeguard to the railroad companies in securing the loading of cars to a proper point. Without it railroads would be hauling half empty cars a good part of the time, at an added expense for service and with an increase of the chronic difficulty of car shortage.

But the application of the minimum weight is often the result of ignorance of conditions and of commodities, and sometimes results in an unjust discrimination between the shippers. The large car element has entered into this question to make it more difficult of solution, while there are cars which it is almost impossible to load to a minimum weight with some forms of lumber. There are cars which are sometimes so large that they are objected to for ordinary trade; and, altogether, there is a condition of things which is not satisfactory for either the road or the shippers.

It is proposed by some railroad authorities to abolish the minimum weight clause entirely, and provide simply that a car shall be full, or as full as practicable considering the commodity, and then make the rate per hundred apply to whatever weight the car may be shown to carry. Such a plan as this would establish an absolute equality of rates as between all shippers of the same class of goods. It would also take it out of the power of the traffic man to favor particular shippers by giving them special car advantages, and thus remove a discrimination which is often the cause of complaint. With such an arrangement there would be an added inducement for the mechanical departments of the roads to develop standard sizes of cars which should be, all things considered, the most desirable in dimensions and load carrying ability.—The Timberman.

THE HINDOO'S METHOD OF SELLING WHEAT.

Some English millers, some few years ago, made a certain outcry about the unnecessary amount of dirt contained in the Indian wheat arriving in this country. That there was so much dirt in this kind of wheat was said to be due to the tricks of the intermediate dealers, who were supposed to make a handsome profit out of the "judicious" mixing of dirt with the wheat which they sold. We learn, however, from a correspondent who has had experience in India, that this is only partly true. The miller in India buys whenever possible of the grower direct, at the bazaar; in such cases the wheat is free from dirt, especially just after the harvest; late in the season, however, the wheat contains a larger percentage of impurities, because it is stored in earth pits. The very dirty wheat is generally that which is obtained from the native middlemen, who, it would appear, have an unenviable reputation for what the French would call *escroquerie*.

The method of buying wheat in India sounds curious to English ear. An Indian miller who goes to the market, or the bazaar as it is called, to buy wheat, does not offer so many shillings per quarter (or the equivalent in Indian currency and measure), but asks how much wheat he can have for a certain sum. The common Indian weight (for wheat) is a seer of a little over 20 pounds English, and the coin is a rupee, nominal par value 2s., but at present only worth about 1s. 3d. in English money. The Indian grower, therefore, quotes his wheat at so many seers for a rupee, not vice versa, and unless reports errs the pious Hindoo is a shrewd grain dealer. He is a sort of speculator too, albeit somewhat obstinate; for instance, if he thinks that six seers of wheat are worth a rupee, he will bury his grain in pits until he obtains that price; it is, in fact, an open secret that the present famine in parts of India is not so much due to actual scarcity of wheat as to fear of future dearth of grain, and of the consequent

holding back on the part of those natives who own the existing stocks.—*Millers' Gazette*, London.

SHEET METAL FOR GRAIN SEPARATION.

In a late number of *Le Meunier*, a firm of engineers explains at length the advantages of a new type of perforated sheet metal for use in the cylinders of "trieurs." The trieur, we may explain is a grain separator analogous to our cockle sepa-

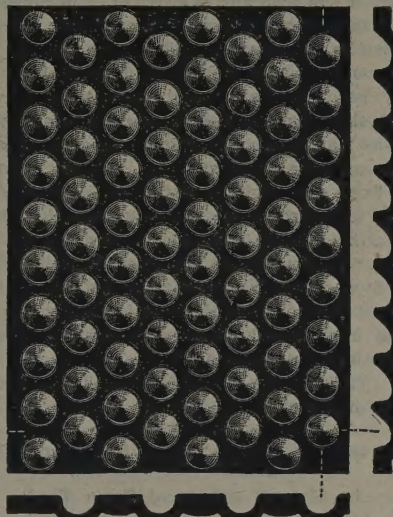


Fig. 1.

erator. It consists essentially of an indented cylinder, and the improvement relates to the form of the indentation and the method of making it. The disadvantages of the ordinary trieur cylinder are due variously to the thinness of the sheet metal, the form of the indentations and the method of making them. When the cavities, pockets or indentations are made by pressure on the sheet metal, only a comparatively thin sheet can be used, and the cavities being semi-spherical, they clear themselves too

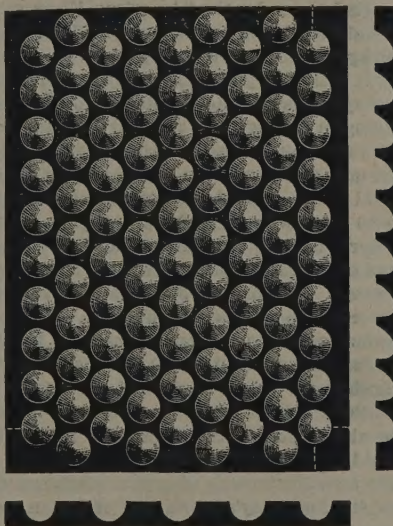


Fig. 2.

easily. As a result, as the cylinder revolves, the seeds or grains to be removed fall back in the wheat. When the cavities in the trieur cylinder have been bored into metal, the result is better, as the use of a stronger sheet of metal is necessitated, and a larger relative surface of the cylinder can be utilized. The objection is in the semi-spherical shape of the cavities, so that no better result is given than in the former case.

The third form of sheet metal cylinders for trieurs is that in which the metal is stamped. The stamping permits the giving of the only form of indentation which is effectual in grain cleaning; that in the shape of a pocket, and shown in Fig. 1. While this form of indentation is better for cleaning purposes than that of the two just mentioned, the ca-

capacity is smaller than the last named kind, because a smaller number of indentations can be stamped on a given surface than can be bored on the same surface. There are, besides, other points in which the stamped cylinder is claimed to be objectionable. The cavities obtained by stamping have the edges rounded and the space between them is slightly curved.

The second illustration, Fig. 2, gives the form of indentation or perforation made by N. Heid of Stockerau, Austria, and patented by him. The indentations have the form of the pocket, and their edges are well defined. The cavities are drilled, and it is claimed that 25 per cent. more surface can be utilized than when they are stamped. As the cavities do not empty themselves readily, it is thus possible to place the collector quite high in the cylinder, thus preventing good grains from being carried over into it. In this way the double result is claimed of a better separation, and less loss of good grains, while securing large capacity from a given cylinder surface.

STORAGE AND INSURANCE AT CONNECTING POINT.

It has always been the practice with railroad companies that were desirous of building up the business of the lines to take grain for shipment to points beyond their lines and to look to the connecting carrier to care for the grain when delivered at the connecting point. But one little road has seen fit to require the shipper to care for the grain 10 days after its arrival at connecting point. This, too, in the face of the fact that it issues a bill of lading contracting to deliver the grain at destination.

The order issued, with all its different tag numbers, is as follows:

INDIANA, DECATUR & WESTERN RAILWAY COMPANY.

GENERAL FREIGHT DEPARTMENT.

Amendment No. 2 to { I. C. C. No. 45,
Circular No. 561. (File 138.)
(Amends circulars Nos. 505 and 561.)

TRANSFER CHARGE AT INDIANAPOLIS ON GRAIN, CARLOAD.

All Agents and Shippers:
Owing to the inability of connecting railroads to furnish cars in which to transfer grain this company cannot accept grain destined beyond Indianapolis except at the expense of shippers for storage and insurance after the grain has been held in store ten (10) days waiting for cars.

Issued Nov. 5, 1896, by Jno. S. Lazarus, G. F. A.,
I. D. & W. Ry., Indianapolis, Ind.
(250) Advice No. 947.

This road may win business by placing exasperating restrictions about its shippers, but its actions are more likely to drive business away. If this little road would confer with its shippers together they could induce connecting lines to furnish cars promptly at the connecting point, by diverting all traffic to the line which would promise to furnish cars as needed.

METRIC SYSTEM OF WEIGHTS AND MEASURES.

An effort will be made at this session of Congress to secure the adoption of the metric system of weights and measures, which was invented about 100 years ago, and since that time has been adopted by a majority of the civilized nations of the world, the only important countries which have not being the United States, Great Britain, and Russia. With the two exceptions it is used by every European nation. Even in those countries it is used by scientific men in their calculations, but in the ordinary affairs of every day the cumbersome tables of weights and measures are still employed.

The metric system is a decimal system similar to that used as the basis of the United States currency, and its advantage in computation is illustrated by the ease with which cents can be reckoned in dollars and dollars in cents, while it requires some arithmetic to reduce pounds to pence in English currency.

Join the Grain Dealers' National Association,

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

SHIPPING AT TACOMA.

Editor American Elevator and Grain Trade:—According to the report of the Harbormaster of the port of Tacoma, Wash., the ocean commerce of that port during 1896 included the exportation of 3,076,821 bushels of wheat (to foreign destination), valued at \$2,218,247.10; coastwise shipments of 434,619 bushels of wheat, valued at \$251,771.40; flour (to foreign destination), 326,475 barrels, valued at \$1,012,675.77, coastwise, 56,199 barrels, valued at \$159,571.50. Inward registered tonnage during the year was 571,104, inward cargoes, 78,714 tons; outward registered tonnage 616,892, outward cargoes, 640,851 tons. Deep sea arrivals 428, departures 414.

SAMUEL COLLYER,
Secretary Chamber of Commerce.
Tacoma, Wash.

BUSINESS IS QUIET.

Editor American Elevator and Grain Trade:—We let a neighbor grain man have our November number of the "American Elevator and Grain Trade," and by some means it was lost. We would like another copy of it to keep on file in our office. We appreciate the paper very highly.

We notice that Secretary W. H. Chambers moves from Hepburn to Des Moines, Iowa, after January 15, where he can better attend to the business of the Grain Dealers' National Association. We think it is a good move. On account of low prices and bad roads business is very quiet with us, which we presume is the case with most grain men at present.

Yours for success, H. REAM & SON.
Lstant, Ill.

WILL NOT RECEIVE CONSIGNMENTS FROM FARMERS.

Editor American Elevator and Grain Trade:—We have made arrangements with one of the large Chicago commission houses, along with other shippers in this territory, according to which they refuse to accept any consignments from farmers, or refuse to buy from them in the territory operated by the regular dealers. That is, they will refuse to accept bills of lading from them, and will turn the drafts down. This establishes a precedent which we think is very important for grain dealers.

We think that in nine-tenths of the trade, grain dealers will deal with such commission houses and let the houses who receive this kind of business alone. Commission houses hurt themselves badly by handling this sort of business, though they may not know it. We believe that commission merchants who guarantee that they will not handle irregular business of this kind will be the ones to get the business on consignments from regular shippers. Farmers who ship their own grain very seldom make as much as they can get for it at home, while the man who has money invested in elevator property has to stand by and see the stuff go out of his territory.

Yours truly, E. R. ULRICH & SON.
Springfield, Ill.

NO SPOILED CORN AT GALVESTON.

Editor American Elevator and Grain Trade:—Changes have recently been circulated through the newspapers of spoiled grain at Galveston. We would feel gratified to have the truth made known through the columns of the "American Elevator and Grain Trade," and submit the accompanying clipping from the Evening Tribune of Galveston as a fair statement of the facts. The story of the spoiled grain is emphatically denied, and the advantages of shipping through this port strongly insisted upon by experienced grain men, whose acquaintance with the grain business has not been acquired at Galveston only, but in the prominent grain markets of the country. [The clipping is as follows]:

"The enemies of Galveston as a port have gone so far in their efforts to divert grain exports from this port as to circulate stories to the effect that there are now on track here over 2,000 cars of

spoiled grain. These stories, while false in every particular, have not been without a certain effect. One result has been that a large New York concern, which handles an immense amount of grain, has sent an agent to Galveston to investigate the rumor. This gentleman arrived and went at once to the elevator and asked to see the spoiled grain. Superintendent Evans told him that he would be glad to show him every bushel of grain now in the Galveston yards, and that he was at liberty to inspect that in the elevator, but that he could not show him the spoiled grain, for the very good reason that there is not a bushel of such grain here, but there never has been any to speak of. The gentleman was shown all over the wharf company's elevator, and when he had completed his examination, he said that a more disingenuous lie had never been told on any port. He found all grain stored here in most excellent condition, and expressed amazement that there was absolutely no damaged grain in sight.

"You can give me," said Mr. Evans, "corn to handle here, and I will guarantee to improve it one whole grade, through no other process than keeping it in this climate. The idea that any grain has spoiled or gotten out of condition here is absurd on its face, when the peculiar climatic conditions are taken into consideration. It is simply wonderful, the influence the Galveston climate has on grain, both corn and wheat."

Truly yours, HANNA & LEONARD.
Galveston, Texas.

ST. LOUIS WEIGHTS IMPROVING; DOCKING AT CHICAGO ELEVATORS.

Editor American Elevator and Grain Trade:—Our East St. Louis weights are running excellently since we have been using the stamp referred to in the December number on invoices of grain. We think there has been an average of about half a bushel to a bushel shortage on about 250 cars. This is certainly a good showing.

The following is a letter which we received recently addressed to Mr. E. R. Ulrich Jr. It seems to us to contain some very important facts. It exactly corroborates the opinion of the representative of the Illinois Grain Dealers' Association, who made a personal investigation of the matter. It is dated from Chicago:

"I am glad to see by the "American Elevator and Grain Trade" that you are doing something to stop the shortage abuse. My sympathy is with you, and I believe it is time to push along the work of reform.

"You may be as well acquainted with the system of weighing in Chicago as I am, but perhaps I can give you a few points of some value to you. I am an elevator man, and have been in my present position for several years. It is the custom of most elevators to take 50 pounds from each car of grain, and as much more as the weighman can get. Twenty pounds is enough rake-off to offset the shrinkage in any elevator. On No. 2 or 3 wheat the overrun of an elevator in one year is quite an item. It will pay the running expenses of some houses. I know of some houses that overrun 25,000 bushels, and others 50,000 bushels per year. I believe I am safe in saying that there are men holding situations on these grounds, alone; that if the house did not overrun they would not remain there long.

"I have seen 300 bushels of grain cleaned up from the floor from one day's work, and of which no account was made. I know of cleaning houses where they boast of having never run the house short for the reason that they take from 100 to 300 pounds of grain from each car. I would like to see some of these men given the full penalty of the law, and the Grain Dealers' National Association is the one to bring this about. The Board of Trade talley-men are working for the elevator men, who appoint them, and they care little for the interests of the country shipper.

"I believe that the Grain Dealers' National Association should at once appoint men who are competent to go into an elevator, inspect it thoroughly and demand that repairs be made. Repairs are needed in most of the houses in Chicago. The spout leading from the elevator head to the scale usually holds about 5 bushels, and is the cause of a great number of shortages. There should be a place made

in the spout so that the talleyman could look after it from the scale floor. Shortages are sometimes caused by the scale revolver resting on the bin spout, which is something the talley-men never look at.

"I would gladly give my name and address, but withhold it for fear that I might be under the necessity of looking for a situation. So for convenience sake I will call myself 'Mr. Weighman.'"

Truly yours, E. R. ULRICH & SON.
Springfield, Ill.

WAY FOR DEALERS TO GET PROTECTION.

Editor American Elevator and Grain Trade:—I have talked to a few dealers and explained the object of the Grain Dealers' National Association. They think it is a good thing, especially if it will be the means of causing local and state organizations to be formed. While all are interested, many want to hold off until they see what good is going to be done, instead of sending in their petitions and putting their own shoulder to the wheel.

I received a letter a few days ago complaining about the treatment a shipper received in one of the graded markets. He inclosed a late circular of the Grain Dealers' National Association and checked "uncommercial conduct" and "unfairness in grade and weights." If he wants relief he had better send in his application to the Association and have his claim investigated. This is the way for the dealers to get protection. In this section competition is so great that some dealers are paying the farmer within one-half cent of what they are selling corn for. True the farmer is getting a small price for his labor, but at the same time dealers cannot afford to work for nothing and board themselves. The wideawake dealers will soon see the value of the Grain Dealers' National Association, inasmuch as it will be the means of forming local and state organizations, members of which can obtain redress for grievances through the National Association, if unable to settle through the local branch.

Yours truly, E. A. GRUBBS.
Greenville, Ohio.

KANSAS DEALERS ORGANIZE.

Editor American Elevator and Grain Trade:—The Grain Dealers' Association of Northeastern Kansas was organized at a meeting held at Holton, Kan., December 29. The following officers were elected: H. B. Hieatt, president, Willis, Kan.; J. W. Thomas, vice-president, Home, Kan.; J. G. Elliott, treasurer, Holton, Kan.; E. J. Smiley, secretary, Dunavant, Kan. Board of Directors: L. Cartleyou, Muscotah; Frank Thoman, Summerfield; W. O. Sturgeon, Valley Falls, Kan. Nearly every county in the northeastern part of the state was represented at this convention, and there was a large and enthusiastic meeting. There appears to be a desire among grain men everywhere to organize and to protect their own interests. They fully realize that unless something is done by them they cannot expect relief. The next meeting of the Association will be held at Atchison, Kan., January 20.

I have sent out the following notice to regular dealers:

"At a meeting of the grain dealers of Northeastern Kansas, held at Holton, Kan., Dec. 29, 1896, there was launched the Northeastern Kansas Grain Dealers' Association—for good or bad, for success or failure. There were present dealers from most counties in Northeastern Kansas, and letters were read at the meeting from some 100 more, indorsing the movement and offering their support. As a result, the meeting organized itself into an Association, adopted a constitution and by-laws, and accepted as charter members all who were there, and those who had indorsed it by letter. This gave it a grand footing. We now appeal to those of Northeastern Kansas who are legitimately engaged in the grain business.

"The aim of this Association is the eradication of all the ills that surround the grain trade to-day, which it is consistently possible to remove and impossible to reach individually. It is a conceded fact that no line of trade to-day is suffering as severely as the grain business, and in a good many cases it is through the fault of the grain dealers themselves; so, if by banding together and working

for each other's interests we succeed in removing even one-half of the evil conditions, we think this Association will then be a success, and that those who have given it their influence and support will be more than repaid for their trouble and expenditures.

"There will be a meeting of the organization held at the Byrum House, Atchison, Kan., Jan. 20, 1897, at 7:30 p. m. You are earnestly requested to attend. Address all communications to the Secretary."

Yours truly, E. J. SMILEY, Secretary.
Dunavant, Kan.

SAYS ELEVATOR MEN TAKE 4 TO 6 POUNDS.

Editor American Elevator and Grain Trade:—I do not want to tire you with my effusions about the Farmers' Commission Co., but the so-called "Farmers' Friend" has written another letter of "Advice to Farmers," from which I wish to quote a few statements to show how he is maligning the country elevator men. He writes: "It gives us pleasure to announce that the head of the house of H. H. Carr & Co. met with the Farmers' State Grange assembly of Illinois last week, that the representatives there were not only in full sympathy with his work in pushing the plan of farmers' shipments, but gave much promise of help in that direction. New shipping points are added almost daily where the 'advices to farmers' have been considered and acted upon. One farmer recently wrote that the difference in the legal bushel in Chicago and the bushel of four to six pounds extra taken by country buyers would induce him to ship hereafter. The time is not far distant when farmers' shipments will be general. Railroads will be forced to make special preparations for individual shipments. The farmers have begun a new era. H. H. Carr & Co. will in the future, as in the past, act as their special champion in promoting direct shipments for greater profits."

Is Mr. Carr's statement that we take sixty-four to sixty-six pounds for a bushel slander? Is he amenable to the laws governing this crime? I see no reason why he should not be. Surely his false statement will injure the business of every country elevator man whose patrons it reaches. I am slowly withdrawing my business from the Chicago market because, I think the regular dealers there have not given us the consideration to which we are entitled. Being a member of the Board of Trade, and having an office in its building, he is permitted to wear a cloak of its approval—a thing he has not and never will get.

L. T. CHASE.

AIMS OF GRAIN DEALERS' NATIONAL.

Editor American Elevator and Grain Trade:—I am receiving so many letters from all sources in regard to the Grain Dealers' National Association inquiring what it hopes to accomplish, what it is doing, and what will be the result if grain men should take an interest in its promotion, that I think it advisable to explain the idea of this new movement, and the necessity of every legitimate grain dealer giving it his support.

It is not necessary to call to the mind of anyone the conditions that exist at the present time, as from what I can learn it seems to be the unanimous report of all that the grain trade is in such a bad condition to-day, from different causes, that those who engage in it meet with a steady and sure loss. As a result of this condition there arose a desire among some to organize and see if something could not be done to change the outlook. Good state associations were organized for the purpose of removing the scalping element and to promote a friendly feeling among the dealers themselves. This seems to have been a good move on the part of those who took part in these different associations, as they have accomplished what they started out to do in a friendly way, and have a substantial result in the way of increase in the earnings of their business.

As these difficulties were removed others appeared, which it has been proven were out of the reach of the state associations. Among these are the matter of shortages, both in transit and at terminals, appealing to the railroads for a compensation for furnishing facilities for the receiving and storing of freight (grain), the loading of the same on cars for the companies, doing away with losses occasioned

by being robbed by irresponsible receiving houses, and protection against uncommercial conduct on the part of receivers. These and a good many other matters that would come up were found not to be within the reach of the smaller organizations, for the reason that any one of these questions involved a larger portion of the trade than a local association had under control, and it would be useless to try to remedy the evil. A proposal to remedy any one of the evils mentioned would not receive consideration from the parties interested, when such proposal came from an individual or organization representing 100 dealers of one district. The opposing parties could afford to lose that small trade, as the profits on the trade still at hand would be more than the profits on the trade they would lose if they made the change proposed. So the demand would be a useless one, unless it was made by all, or the majority, of the grain men of the country, or of the district covered by the party in question.

Seeing the result of the good work of organization in localities and states, and feeling that if the grain trade of the United States could be brought together and placed on one footing it would only be a question of time when it would be able to accomplish for the trade what nothing else so far has been able to accomplish, the Grain Dealers' National Association was organized through the efforts of the "American Elevator and Grain Trade" and a large number of the leading grain men of the country on the 9th day of November, 1896, at Chicago, Ill. The purposes as presented above were the reasons for forming this organization. If they can be carried out with as much success as are the plans of the local associations, and with what the local associations have accomplished as an object-lesson of what we could hope to do if we concentrate the grain interests in a National Association, it surely ought to place this movement before the trade in such a light that it would receive the consideration of everyone who has an interest in the business.

Let us stop and think a moment. Look over the situation, and foretell the future of the grain trade of the country, especially of the country shippers, if there is not something done for their relief in a short time. If you are not in a position to judge this outcome then you are a fortunate dealer. But I think that the large majority of the dealers will concur with me in the statement that in the course of a year or two it would be the height of folly to make an investment at any country point in facilities for the handling of grain, unless there is some arrangement whereby the grain man can be protected against the scalpers and unjust losses from other sources.

The question will be asked, How are these reforms going to be accomplished? Would anyone suggest the present method? We have followed this plan ever since 1884, and at the present time it is a complete failure. Some would probably say that all this can be accomplished by the small organizations; that they could get together and work the large field. But the local associations have suggested this very matter of a national organization. Then if this is the thing to be done, the sooner something is accomplished in this line the sooner it becomes a reality, the better it will be for the trade in general. Believing that this was the idea to be carried out the Grain Dealers' National Association was organized, and it is now asking for the support of all the grain men of the country to help to carry out its aims.

As Secretary of the Association, I have placed this matter before some 3,000 of the dealers of the country. Many of them have indorsed the movement. Some do not stop for further consideration, but send their application, saying that it is a move in the right direction; others write me that they think it is all right, but will wait to see what it will accomplish, and if it will do any good they will take a hand in it. These last are doing what will keep the Association from becoming effective, for the very reason that it cannot do the good that it hopes to do without the majority of the dealers are in the work. When we have the majority of the dealers we will be able to request

reforms, and from the fact that it is the grain trade which is making the request, it cannot be idly turned down without a loss of business to the party interested. And this will not be done if the request is a reasonable one, for the business will be more remunerative to keep than to let go.

There are large numbers of dealers throughout the country to whom I have not been able to present this matter before, because I have been unable to secure their names. If this should meet the attention of any of these I would be glad if they would write me concerning the Association, and find out what is to be done. In looking over the different lines of trade, we will not find any but what are organized and working in close harmony. Why do they do it? Simply because they have found it a necessity, so that they could secure a fair return on the investment that they would make in their special lines of trade. Look at the large interests of the country. We have a good example in them. Some call them trusts. Looking at their past history we find that prior to their organization, when they fought among themselves, it was only a question of time till some of them had to go into the hands of the receivers, or the sheriff sold them out. They came to see the folly of working on that line, and organized for mutual protection. That which has proven a necessity for all lines of business outside of the grain trade would seem to be essential to the good of this line, when it is taken into consideration that the grain business comprises more of the commerce of the country than any other individual line of trade. Why this movement was not started before is a surprise to a good many. One reason for it might be that the average grain man was so accustomed to fight it out alone that he did not suppose anything could be done for him.

Now, the National Association is a thing of reality. It has good officers, and in the short time that it has been before the dealers has secured quite a membership, and is receiving applications daily. It has taken up quite a few matters which have been called to its attention and has corrected them. But to do the work for which it was organized it will want all the dealers to take part in it. I have taken this means to call the attention of as many as possible to what seems to be their duty in regard to this work. It will take only a small part of one's time to give it at least an investigation. If he then finds that it is not in the right he can feel that he has done his duty to himself in looking after his interests. But when he has done this, and if he should find, according to his judgment, that it was not just right in some particulars he should not drop it, but give it his support, and make an effort to help it out where it is deficient. There will be no betterment of the conditions which now exist, unless something is done to correct them, and this is a move for that end.

To those who have taken membership, I would like to say, we can do you no good unless you will give us the facts regarding any trouble that you might have in your locality. There is a disposition among members of local associations to make complaint of the Association not being of any benefit to them. When asked why, they say that such and such a matter had not been corrected. On further inquiry as to what complaint they had made I have found that none had been filed with the Secretary, and that he did not know that anything was the matter. We as an association can do no one any good unless he will give us the facts regarding any matter which is wrong at his place. Nor can we do the trade as much good without these complaints as we can with them, as when we will correct one abuse it will help to correct another in another locality.

I would suggest that members making complaint give all the facts that they are able to, names of parties in question, dates if any, an exact statement of the case, and if pertaining to shortages in weights a full list of same at both ends, sworn to as correct. If this is done it will facilitate the work and be much more effective.

I would also call the attention of the receiving houses to this movement. If there is anything done that will prove a benefit to the grain trade in gen-

eral it can but help receivers. If we as an association can remove from the lists of the country dealers the shifting scoop-shovel man, it will be a benefit to receivers because their losses in dealing with that class of dealers will be reduced. If we can secure for settlement with the receivers' customers a better and more satisfactory system of weights it would well repay them for aiding the movement. If we can change the manner of doing business as practiced by some irresponsible dealers it will be a benefit to those who are carrying on a legitimate business. If we can place receivers in closer touch with the shippers of this country we help them again. So, taking all matters into consideration, it looks as though it would be a matter of necessity for every responsible receiver, terminal house, and all others engaged in handling grain at large centers, to give this movement their support, or at least their consideration. I hope to hear from all those interested in the trade and in this movement.

W. H. CHAMBERS, Secretary.

Des Moines, Iowa.

QUERIES: AND: REPLIES

[Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.]

No. 13. State Weights for Illinois.

Does the Illinois Warehouse Law provide for a state weighing department to weigh grain received at and shipped from public elevators at central grain markets, or for state supervision, or inspection of the weighing? Any information on this point will be thankfully received.—SHIPPER.

No. 14. The Largest Elevator. A Correction.

In the "American Elevator and Grain Trade" of Dec. 15, 1896, under the head of "Queries and Replies," in reply to an inquiry about the largest grain elevator, the Globe Elevator is credited with 2,000,000 bushels' capacity. The Globe Elevator at West Superior has a capacity of 5,000,000 bushels, and we know at one time they had 4,700,000 bushels of wheat in store. I believe the Globe Elevator is the largest in the world at the present time. The Interior Elevator, located at Minneapolis, has a capacity of 3,250,000 bushels. Mr. Frank H. Peavey of Minneapolis is president of these companies.—B. H. MORGAN, Secretary and General Manager Interior Elevator Co., Minneapolis, Minn.

EXPERIENCE OF A SLEEPY RECEIVER.

A peculiar case happened on 'Change recently among the grain men. One of the best known dealers had a car of wheat graded No. 3, which was held at the market price of 87 cents. Rejected wheat was selling at 77 cents, and another dealer asked the first mentioned what he would take for his car. "Seventy-seven cents," he promptly responded.

"All right," said the second dealer, "I'll take it," and the order was made out.

A few moments later the first man recognized the mistake he had made in quoting his No. 3 wheat 10 cents too low, or at the price rejected wheat was bringing, and he notified the purchaser of his error.

"Oh, no," said the buyer, "that doesn't go. You sold the car outright, and I have the order for it now."

The difference that would be lost by the seller would have been \$60, but after some persuasion the purchaser decided it would be best to make allowances and give the order back. As a matter of fact he could have held the seller to the deal under the rules, and for some time it seemed as if this would be done.—Cincinnati Enquirer.

It appears that the pessimist was not far out of the way when he said that to demonstrate the value of anything to the Western farmer was simply to invite all sorts of insect and other enemies. A farmer in Southern Illinois says that two enemies to Kaffir corn have made their appearance the past season. One is an insect that bores into the kernel when it is half grown, and the other is mildew.

RULES GOVERNING KANSAS INSPECTION.

A committee consisting of A. C. Merritt, State Grain Inspector; N. P. Simonds, representing the Kansas City Board of Trade; C. C. Wilburn, the Argentine Board of Trade; E. D. Morgan, the Coffeyville Board of Trade; P. Killey, the Atchison Board of Trade, has adopted the following rules to govern the grading of grain in Kansas, and they were put in effect September 14:

RULE I.—WINTER WHEAT.

No. 1 White—To be bright, sound, dry, plump and well cleaned, pure white winter wheat.

No. 2 White—To be sound, dry, well cleaned, pure white winter wheat.

No. 3 White—To be sound, dry, white winter wheat, reasonably clean.

No. 1 Red—To be bright, sound, plump, dry and well cleaned red winter wheat, and weighing not less than 61 pounds to the measured bushel.

No. 2 Red—To be sound, reasonably cleaned, red, dry, and weighing not less than 59 pounds to the measured bushel.

No. 3 Red—To be sound, reasonably well cleaned, red, with not more than 10 per cent. white winter wheat below No. 2 Red, weighing not less than 56 pounds to the measured bushel.

No. 4 Red—To be red, white or mixed, thin or bleached winter wheat, reasonably sound and unfit to grade No. 4 Red.

Rejected Winter—All damp, tough, very musty, very smutty, trashy, dirty, damaged or thin wheat falling below No. 4 Winter.

CALIFORNIA, COLORADO, WASHINGTON, IDAHO AND UTAH WHEAT.

No. 2—To be sound, dry, well cleaned, pure white wheat, free of smut; grown in California, Colorado, Washington, Idaho or Utah.

No. 3—To be sound, dry reasonably cleaned white wheat; grown in Colorado, Utah, California, Washington or Idaho.

Wheat of the above description of lower grades to be based on the merits as regular No. 4 or rejected.

KANSAS HARD WINTER WHEAT.

No. 2—To be sound, dry and reasonably clean, hard winter wheat, and to weigh not less than 59 pounds to the bushel.

No. 3—To be sound and reasonably clean, hard winter wheat, and to weigh not less than 56 pounds to the bushel.

No. 4—To be reasonably sound, thin or bleached hard winter wheat, unfit for grade No. 3 Hard.

In case of mixture of hard winter wheat with soft winter wheat, it shall be graded according to the quality thereof and classed as hard winter wheat.

SPRING WHEAT.

No. 1—To be bright, sound and well cleaned spring wheat.

No. 2—To be bright, sound spring wheat, reasonably cleaned.

No. 3—To include all dry, reasonably sound spring wheat, not equal to No. 2.

WHITE SPRING WHEAT.

No. 1 White—To be bright, sound and well cleaned white spring wheat.

No. 2 White—To be bright and sound white spring wheat, reasonably clean.

No. 3 White—To include all dry and sound white spring wheat below No. 2.

REJECTED SPRING WHEAT.

All damp, tough, musty, very smutty, trashy, dirty, damaged or thin spring wheat falling below No. 3.

MIXED SPRING AND WINTER WHEAT.

All mixed spring and winter wheat of sound quality to be graded as spring, according to quality and conditions.

RULE II.—CORN.

No. 1 Yellow—Shall be pure yellow corn, sound, dry and well cleaned.

No. 2 Yellow—Shall be three-fourths yellow, sound, dry and reasonably clean.

No. 3 Yellow—Shall be three-fourths yellow, reasonably dry and reasonably clean, but not sound enough for No. 2 Yellow.

No. 1 White—Shall be pure white corn, sound, dry and well cleaned.

No. 2 White—Shall be fifteen-sixteenths white, sound, dry and reasonably clean.

No. 3 White—Shall be seven-eighths white, reasonably dry and reasonably clean, but not sound enough for No. 2 White.

No. 4 White—Shall be seven-eighths white, not wet or in heating condition, and unfit to grade No. 3 White.

No. 2 Corn—Shall be mixed corn of choice quality, sound, dry and well cleaned.

No. 1 Corn—Shall be mixed corn, sound, dry and reasonably clean, but not good enough for No. 1.

No. 3 Corn—Shall be mixed corn, reasonably dry

and reasonably clean, but not sufficiently sound for No. 2.

No. 4 Corn—Shall include all mixed corn, not wet or in a heating condition, that is unfit to grade No. 3.

RULE III.—OATS.

No. 1 Oats—Shall be mixed oats, sound, clean and free from other grain.

No. 2 Oats—Shall be mixed oats, sweet, reasonably clean and reasonably free from other grain.

No. 3 Oats—Shall be mixed oats that are slightly damp, slightly musty, dirty or for any other cause unfit to grade No. 2.

No. 4 Oats—Shall be mixed oats, not wet, or in a heating condition, or from any other cause unfit to grade as No. 3.

No. 1 White Oats—Shall be pure white, sound, clean and free from other grain.

No. 2 White Oats—Shall be seven-eighths white, sound, reasonably clean, and reasonably free from other grain.

No. 3 White Oats—Shall be seven-eighths white, but not sufficiently sound and clean for No. 2.

No. 4 White Oats—Shall be seven-eighths white, not wet or in a heating condition, badly stained, or from any other cause unfit to grade No. 3 White.

Yellow or Golden Oats—Shall be graded according to the quality thereof, and not classed higher than No. 3 White Oats.

RULE IV.—RYE.

No. 1—To be plump, sound, bright and well cleaned.

No. 2—To be sound and reasonably clean.

No. 3—To be reasonably sound and cleaned.

No. 4—To include all damp, musty, dirty rye unfit for No. 3.

RULE V.—BARLEY.

No. 1—To be plump, bright, sound and free from other grain.

No. 2—To be sound and reasonably clean.

No. 3—To be reasonably clean and merchantable. Rejected—To include all unsound and damaged barley.

RULE VI.—NO GRADE GRAIN.

All grain that is wet, hot or in a heating condition shall be classed as no grade.

RULE VII.

Wheat containing live weevil shall not be graded, but the inspector shall give the variety of wheat, and test weight, and note live weevil.

SCREENINGS.

"BEARS" have been dancing to "Indian music." It's a new thing for them.—Zahn.

"CORN is not as brisk as wheat," says the Philadelphia Times, but "it is on its ear."

SPEAKING of shortages, if some terminal weighmen would let reliable scales have their weight much evil might be remedied.

FIRST Car Horse—What are you doing since the trolley gave you the G. B.?

Second Car Horse—I'm at work a la cart.

"Getting good feed?"

"Oh, yes; I take table d'eat dinners."

INVESTIGATOR (to wheat grower in 1895)—"Why are you in such an impoverished condition? You raise plenty of wheat."

Wheat Grower—"Oh, yes; but India raises grain so cheaply and has such a large export trade that my grain is simply rotting on my hands."

Investigator (in 1896)—"Well, what's the matter now; prices have gone up, haven't they?"

Wheat Grower—"Yes, but it takes all my money to buy food for our missionary society's expenditures to succor the starving people of India."

"BUCKET-SHOPPING," she repeated slowly to herself, as she put down the paper, "I've seen that word several times of late in the newspapers, but I don't quite understand it. Of course, if it's a new fad, I'll have to take it up with the rest, but I really don't see any sense in it. I never have had to do any special shopping for buckets in all the time that I have been keeping house. Of course, now and then, when one is out after samples, a bucket might be a good thing, but I don't see why it isn't just as easy to carry a leather bag of the same size. Really, I don't see the use of shopping either with or for buckets, and I don't see what there is to make it so attractive."

The Buffalo Grain Shovelers' Union held its last meeting of the year December 17. The report of the Treasurer showed that 14 death benefits of \$100 each had been paid during the year, and that there was nearly \$2,000 in the treasury.

THE STORAGE OF GRAIN.

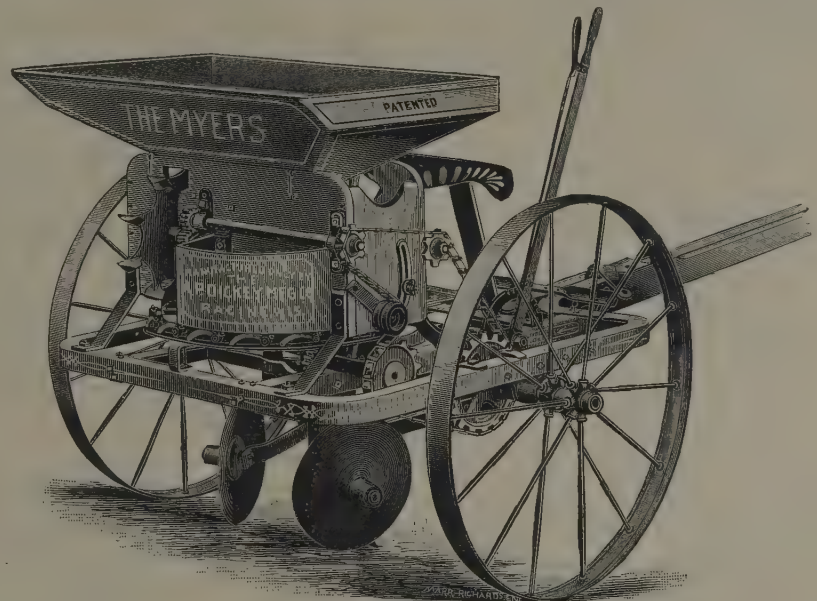
[From a paper by Percy Wilson Britton, Assoc. M. Inst. C. E., read before the Institution of Civil Engineers, London, and awarded the Crampton prize.]

Grain is stored in floor granaries, warehouses with open floor space, on which it can be placed either loose or in sacks, and which is available for any other description of goods; or in silo granaries, structures containing large hoppers or bins extending vertically throughout the height of the building, and in which the grain is stored in bulk. Granaries of the former type are limited simply to a predetermined working load on each floor, and require a considerable amount of manual labor to supplement any mechanical appliances that are adopted. Those of the latter type have been developed in their present form chiefly in connection with the American grain trade under the name of "elevator," and, as hitherto constructed in Europe, constitute a reversion to the pre-historic method of preserving grain in a dry and sweet condition for long periods in closed pits or reservoirs.

In 1820 Mr. Doyère constructed a silo in which grain was kept for eight years, and in 1855, when a report on the subject was ordered by the French government, he stated that the system greatly retarded decay. Corn containing about 21 per cent. of water, and in contact with the air gave off 17 milligrams of carbonic acid per kilogram per hour, or 408 milligrams per day, while with the air excluded and at an average temperature of about 68° F., the quantity per kilogram per day was only 120 milligrams; in other words, ventilation or exposure to the air caused nearly three and a half times the decomposition that attended the closed bin system. Prof. Tyndall's experiments have also conclusively proved that the entire absence of floating matter in the air checked all tendency to the development of life in a variety of substances which were readily acted upon by the micro-organisms of putrefaction, though reasserting their power of development upon admission of air. The late Mr. Pasteur further investigated the subject with similar results. The theory of the ancient store pits, confirmed by Mr. Doyère's reports and by Tyndall's experiments, and adopted practically in elevators in America, is that the grain is most perfectly preserved by the absolute exclusion of air; as, during such exclusion, none of the results of contact with the air—such as decomposition, heating or germinating—can be so rapidly developed. The theory that exposure to the air is essential, and that the grain must nowhere be beyond the reach of a continual current of air to protect it from heating, is the characteristic feature of many of the elevators in Europe. The Canada Wharf Granary, at Rotherhithe, provides an example of this construction, being built with iron bins, 41 feet high, 7 feet 3 inches square, with perforated sides and a central perforated tube, up which a strong current of air is forced by powerful fans, so that the grain is in contact with the air on all sides. The Maximum thickness of the column of grain is only 2 feet 7 inches. The author is of opinion not only that any such system of storage possesses no advantage commensurate with the costliness of the form of construction, but that the theory is faulty, and the practical result unsatisfactory. Exclusion of air cannot prevent the continuance of decay in grain which is in a damp condition at the time of being stored, so that it is essential, if the grain is to be kept for any length of time, that it should be transferred in a dry condition or artificially dried before being passed into the bins. It should be occasionally aerated, this by transferring it from one bin to another, and is certainly advisable in preference to running any risk. Where any side of a bin is contiguous to a passage, it is not necessary to run the grain out to examine its condition, as tester-flaps can be provided, through which a grain tester can be inserted. For mill work it is also useful to insert in the front of each hopper or bin a narrow sheet of plate glass, so that the amount of grain within can be seen at a glance. For automatically registering the temperature of the grain at any point inside the bins, inaccessible to ordinary means of inspection, an instrument can be arranged to record the variations of temperature

upon a cylinder diagram, or to show the actual temperature upon a dial and to ring an alarm at any limit of temperature required. Spontaneous combustion is often alleged as the cause of fire, but Professor M. Maercker, in investigating several granary fires attributed to this cause through the heating of grain which had been soaked by floods, has expressed a conviction that spontaneous combustion in soaked and unthrashed grain was all but impossible.

The silo system ensures the maximum utilization of space, and facilitates the storage of different kinds of grain. It is perfectly practicable by its means to keep the stocks of different dealers quite separate, and the hopper outlets can even be secured with locks; and as the system is always associated with a full equipment of mechanical appliances, loading, transferring, and all the laborious processes of manual labor are simplified to the utmost, and the comparative cost both of construction for a given capacity and of working any quantity are reduced to a minimum. The bins may be either square, hexagonal, or circular, and are generally built of wood, brick, concrete or iron. The material depends greatly on the climate. The circular form is the strongest, but it involves considerable



THE MYERS AUTOMATIC POTATO PLANTER.

loss of space, while the hexagonal form requires more material, and is more expensive in construction. Overlapping circular iron bands, with small interstices, may, however, be constructed as the framing to hexagonal bins finished in cement. The square bin is the most suitable for wood on account of the facility of framing.

Wood appears to offer the greatest advantages. It is light, cheap, capable of yielding to inequality of pressure or settlement, a bad conductor, and hygroscopic. Its chief drawback is its inflammability. It is alleged that wood favors the development of the corn weevil, but the insect appears also in grain stored in either brick or iron. Brick is perfectly unflammable and a bad conductor, but it is not sufficiently hygroscopic, and occupies considerable space, besides being extremely heavy, necessitating more costly foundations. Iron, although very convenient for constructive purposes, transmits to the grain every change of temperature, and, being perfectly non-absorbent, causes condensation of all moisture in the grain and consequent rust and mold. Iron framing with cement facing combines good qualities of comparative lightness, economy of space, non-inflammability, and bad conductivity; its chief disadvantages are the costliness of construction and the great liability to disruption of the surface with an uneven shrinking or settlement.

[TO BE CONTINUED.]

The rates on grain storage at Chicago this year are to remain unchanged at $\frac{3}{4}$ cent for the first ten days, and $\frac{1}{4}$ cent per bushel for each succeeding ten days.

THE MYERS AUTOMATIC POTATO PLANTER.

Racine to the front again; this time with an automatic potato planter. This planter is the product of the old, reliable fanning mill and warehouse separator concern, the A. P. Dickey Mfg. Co. of Racine, Wis., which for more than 50 years past has been favorably known to the implement trade. The reputation of their goods is such that we predict for the Myers Automatic Potato Planter a prominent place in the front rank of potato planters.

The chief features of this planter seem to be its simplicity and effectiveness. The machine needs only a team and driver. It is light of draft, and well balanced. The seed is dropped directly beneath the axle in line with the plow, thereby assuring a good even stand. By a very simple means it is adjustable for depth of planting, depth of covering, and also for large or small seed. A lever is placed within easy reach of the driver for raising and lowering the plow—when the plow is raised machine is thrown out of gear; when the plow is lowered, machine is in gear ready for planting.

During the past summer the machine was subjected to a prolonged test in the field under all possi-

ble conditions. The company have already secured orders for quite a number, and will be pleased to answer any inquiries regarding the planter.

CINCINNATI RECEIVERS ELECT OFFICERS.

The semi-annual meeting of the Grain, Hay and Feed Receivers' Association of Cincinnati was held January 7. The election resulted in the choice of the following directors: John H. Allen, Charles L. Garner, W. R. McQuillen, John Collins and J. A. Loudon. The directors organized by selecting John H. Allen as president; C. L. Garner, secretary, and J. A. Loudon, treasurer.

The report of the outgoing officers showed that there had been an income during the past six months. The Association has no dues, and is run by assessments. From previous occasions a balance accrued in the hands of the Treasurer, amounting to several hundred dollars. This amount was invested by the Association, and instead of calling for an assessment it was found that there had been an income of \$24. The expenses during the same period had reached the figure of \$5.25, leaving a balance to be invested with the original fund. A vote of thanks was tendered the outgoing officers.

The Grain Inspection Committee of the Cincinnati Chamber of Commerce has decided that the time for changing the weight of corn in the ear from 70 to 68 pounds should be set for January 15. Accordingly on and after that date ear corn will be 68 pounds to the bushel instead of 70.



A Polish brewery may be established at Mantle, Pa.

Jacob Kunkler has completed a new brewery at Troy, Ind.

A brewery may be built at Jamestown, N. Y., by Buffalo parties.

John C. White has completed his new malt house at Buffalo, N. Y.

The Allentown Brewing Co. will erect a brewery at Allentown, Pa.

A. Aberle has succeeded C. J. Bender, brewer of Fergus Falls, Minn.

Paulina Locher has succeeded John Rohrmon, brewer of Burns, Ore.

It is reported that Louis Lamm will erect a brewery at Chicago, Ill.

Schultz & Rieke have succeeded A. E. Nolte, brewer of Pendleton, Ore.

The Galveston Brewery Co. has erected a new brewery at Galveston, Texas.

Popel & Giller, brewers of Warsaw, Ill., will double the capacity of their plant.

The Ph. Zang Brewing Co.'s plant at Denver Colo., has a new addition which cost \$50,000.

Ayres & Tonningsen have succeeded the Lake View Brewing Co. of Lake View, Ore.

Rudolph Ringgenberg has succeeded David Bush in the brewing business at Oakland, Cal.

Gustav Kuenzel contemplates organizing a company to build a brewery at Dolgeville, N. Y.

The Bohemian Brewing Co. of Chicago has changed its name to the Atlas Brewing Co.

The brewery at Sedalia, Mo., was destroyed by fire recently at a loss of \$25,000. It was insured.

The Senn & Ackermann Brewing Co. of Louisville, Ky., will erect a brewery to cost \$50,000.

John Kopp, brewer of Astoria, Ore., has completed a new brewery at that place which cost \$60,000.

The Christopher Stahlmann Brewing Co. of St. Paul, Minn., has assigned to Joseph Ehrmanntraut Jr.

It is said that Max Schultz and others of Kansas City are preparing to erect a brewery at Wichita, Kan.

Jacob Knoblauch, a well known brewer of Bay City, Mich., died December 14 at the age of 65 years.

G. H. Burg, of Burg & Pfaender, brewers of Philadelphia, died at the age of 49 years, December 22.

A brewery may be erected at Latrobe, Pa., by a company being organized with a capital stock of \$50,000.

The Standard Brewing Co. has completed improvements and additions to its brewing plant at Chicago.

The Pine Grove Brewing Co. has been incorporated at Gloucester City, N. J., with a capital stock of \$50,000.

John Buehler has purchased the brewing business at Steubenville, Ohio, formerly controlled by Mrs. Lucy E. Rall.

The elevator of the Magnus Beck Brewing Co. at Buffalo, N. Y., was recently damaged by a fire which started in the brewery. The elevator was

full of malt and barley, which was badly damaged by water. Loss \$20,000; insured.

The Saratoga Brewing Co. will erect a large addition to its brewing plant at Mechanicsville, N. Y.

William Frank has succeeded and is now carrying on the business of Ebenbauer & Frank, brewers of Sterling, Ill.

The American Brewing Co. of Chicago, Ill., assigned recently, owing to the failure of the National Bank of Illinois.

Volk Bros. are preparing to rebuild their brewery at Great Falls, Mont., which was destroyed by fire a short time ago.

The Bavarian Star Brewing Co. of New York City has been placed in the hands of a receiver, and will be reorganized.

The John Muller Co. has bought the old McCormack brewery at Boston, Mass., and will improve the plant and operate it.

A company is being organized at Sedalia, Mo., for the purpose of erecting a brewery. E. G. Cassidy is at the head of the movement.

Fred Boyle is now carrying on the brewing business at Omaha, Neb., formerly belonging to E. Engler, who died some time ago.

The American Brewing Co., which was recently organized at Indianapolis, Ind., with a capital stock of \$130,000, is erecting a brewery.

The Sacramento Brewing Co. has prepared plans and is preparing to erect at Sacramento, Cal., a brewery of 40,000 barrels' capacity.

The Herold Capitol Brewing Co. of Hartford, Conn., has undergone a change of name, and is now known as the Columbia Brewing Co.

Franz Bros. are rehabilitating the old Schmich Bros' brewery at Freeport, Ill., which they will operate when improvements are completed.

J. S. & W. Brown's malt house at Kent avenue and Taylor street, Brooklyn, N. Y., was recently damaged by fire to the extent of \$4,000.

Benedict Doll has completed repairs and improvements to his brewery at Coldwater, Mich., the capacity of the plant being materially increased.

Chas. P. Anton has purchased the brewery of Elizabeth Gross at Warrensburg, Mo., and will operate the plant after making material improvements.

It is said that a new brewery is to be established at Springfield, Mo., in which F. D. Hofer, formerly of the Capitol Brewing Co., Jefferson City, Mo., is interested.

Alfred E. Seifert, Secretary of the Brewers' Exchange, and of the Lager Beer Brewers' Board of Trade of New York, died December 16 of paralysis, at the age of 49 years.

A storage building attached to the plant of Welz & Zerweck, Brooklyn, N. Y., containing a quantity of malt and hops, was damaged by fire December 27, entailing a loss of \$20,000.

William F. Carthaus and others have organized a company at New Castle, Pa., with a capital stock of \$25,000. The company will increase the capacity of the Tresor brewery, which was operated by Wm. F. Carthaus.

The British government is still laboring with the problem of the use of substitutes for malt in making beer. In answer to the complaint of barley growers that brewers imported cereals to the detriment of the barley trade an examination has been

carried on as to the effect of these substitutes. So far it is found that nothing deleterious is used in brewing.

The Harrisburg Consumers' Brewing & Bottling Co. has been organized at South Chester, Pa., to carry on Robert H. Graupner's brewing business.

The Mount Vernon Consumers' Brewing Co., which was recently incorporated at Mount Vernon, N. Y., with a capital stock of \$200,000, is preparing to erect a brewery at Mount Vernon.

The L. Rosenheimer Malt and Grain Co. of Kewaskum, Wis., intends to erect a large storage elevator at Kewaskum, and to increase its malting plant to double its present capacity.

The Medford Brewing Co. has been incorporated at Medford, Wis., with a capital stock of \$20,000, to operate Schmidt Bros' brewery, which will be increased to double its present capacity.

Owing to the failure of the National Bank of Illinois the Geo. A. Weiss Malting & Elevator Co. of Chicago was forced to assign December 22. Geo. A. Weiss also made a personal assignment.

Morris Weidmeyer of Camden has purchased the old brewery at Highland Park, New Brunswick, N. J., formerly owned by Jos. Schneider, and will reconstruct the plant and put it in operation.

It is said that those interested in barley and hops will try to secure the passage by the legislature of New York and other states of laws restricting the use of substitutes for barley and hops in the manufacture of beer.

We are indebted to Neidlinger & Sons, maltsters of New York City, for a heavy card wall-calendar. It has views of the firm's fine plants at Sixty-third, Sixty-fourth streets and East River, at Fourth street and East River, New York City, and at South Rondout, N. Y.

The Yankton Brewing Association of Yankton, S. D., is making improvements in its malt house which will cost \$1,000. New machinery will be added to its brewing plant, which will cost \$1,500, and ten storage tanks will be added to its malt house at a cost of \$1,000.

It is reported that after a long period of depression and inactivity the malting business at Lyons, N. Y., has opened with a good demand for barley. W. P. Mirick's large malt house has resumed, as have Scott & Co., who malt on contract for S. K. Nester, maltster of Geneva.

Anton Zaba, an employee of the Tosetti Brewing Co. of Chicago, was suffocated in malt on the afternoon of December 29. He was found under 8 feet of malt at the bottom of a 60-foot bin, and it is supposed that he fell in while inspecting the bin. His body was caught at the outlet at the bottom of the bin through which malt is carried. He must have been almost instantly killed after his fall of 60 feet to the wet malt.

The suit brought by the Cereale Mfg. Co. of Indianapolis, Ind., to restrain Hervey Bates and the Indianapolis Hominy Co. from using certain mechanisms in processes of manufacture, has been dismissed by Judge Baker of the United States Court. The defendants in each case were Hervey Bates and Hervey Bates Jr. It is alleged in the first two that the plaintiffs are owners of two patents, one for the manufacture of an alimentary product from corn and the other for separating the hulls and impurities from the kernels. It is alleged that the defendants have appropriated these to their own use, violating the patent. In the third suit the defendants are accused of infringing a patent for an improvement in the art of brewing malt liquor. The judge dismissed each of the cases, thus invalidating the patents so far as his court is concerned.

Chas. Kaestner & Co. of Chicago, Ill., report recent sales of portable mills and oat clippers to the following: Charles, Wheeler, Ind., one 24-inch mill; T. L. Blood & Co., St. Paul, Minn., four 20-inch mills; W. J. Lemp Brewing Co., St. Louis, Mo., one malt mill, 600 bushels an hour; J. G. Weidner & Sons, Aptakisic, Ill., one 24-inch mill; Thomson & Taylor Spice Co., Chicago, one 20-inch mill; J. G. Heaton, Reedsburg, Wis., one 30-inch mill; Fred Buschman, Utopia, Ill., one 20-inch mill; Z. R. Car-

ter & Bro., Chicago, one 30-inch mill; R. Murbach, Berkey, Ohio, one 16-inch mill; Bailey & Kirm, Akron, Ohio, one 30-inch mill; American Glucose Co., Peoria, Ill., one 30-inch mill; R. C. Lubens, St. Ansgar, Iowa, one 24-inch mill; T. H. Bancroft, Trinidad, Colo., one 16-inch mill; Rubber Paint Co., Chicago, one 16-inch mill; Z. R. Carter & Bro., Chicago, one oat clipper; Kneidler Bros., Prairie View, Ill., one 30-inch mill.

MALTING BARLEY.

A large firm of maltsters in Bavaria makes a communication to the Zeitschrift für das Gesamte Brauwesen, respecting the growth of malting barley, which should be of interest to growers in this country.

Finding that the custom of using only the tailings of good malting barley for seed was prevalent among the Swabian farmers, the firm in question makes a point of procuring good seed to supply the local requirements, and places its cleaning machines at the disposal of the neighboring farmers free of charge in order that only well-cleaned seed may be sown. A change of seed from another district is also occasionally provided, to prevent degeneration.

Observation of the methods of sowing shows that better results are obtained by drilling than with the old hand-sowing. Growers are cautioned to stack the barley as dry as possible, and leave it time to sweat properly before thrashing, and they are likewise warned against the practice of cutting the barley before it is ripe with the idea of getting a better colored grain, since for malting and brewing purposes a fully ripe barley is preferable.

Such enterprise on the part of maltsters is extremely commendable and deserves the reward it meets in the improved quality of the barley and consequently increased value of the resulting malt, and is well worthy of imitation.

THE SELECTION OF BARLEY.

The selection of barley for malting purposes requires a very considerable amount of skill and knowledge that can only be acquired by long practical experience. In fact, skillfulness on the part of the barley buyer is half the battle in a large malting business. Not only must he be able to select suitable grain for the various kinds and qualities of malt required, but he must be able to judge of the soundness and probable germinating power of the samples submitted to his inspection. Moreover, from a pecuniary point of view, he must keep himself well posted up in the current market prices, and must be able to estimate to a few pence per quarter the values of the parcels of grain offered. Of course the large firms of maltsters for sale can afford to engage, and do engage, men for this work whose extensive experience has taught them the knowledge necessary; the greatest difficulty arises with the smaller maltsters, particularly with breweries who manufacture chiefly for their own requirements.

For instance, take an imaginary case of a brewery firm having a 30 or 50 quarter house attached to the brewery. The usual manner of working would be to employ one or more under hands and one head maltster. The latter must possess sufficient knowledge of his craft to enable him, with a little supervision, to control and regulate all manipulative details, such as steeping, germinating, drying, etc., but he cannot be expected, neither would it be wise to permit him, to have the selection and purchase of the parcels of barley. Unless one of the firm undertakes this duty, it must fall, and often does fall, upon the operative brewer, whose practical skill is thus put to a severe test. However skillful the working maltster may be, he cannot produce good malt unless he is supplied with suitable barley.

We think brewers scarcely appreciate the importance of acquiring a thorough knowledge of the inner workings of the malting business. We certainly know many successful brewers who have little, if any, experience of this sister industry, but still they may, at some time or other, be called upon to undertake duties in connection with the malting trade, and then their lack of knowledge will be

a serious drawback. We strongly recommend all beginners to acquire a good insight into the malting processes, and to pay particular attention to the selection of barley. This latter qualification they should develop upon every possible occasion.

Brewery pupils would, we are confident, enhance their future prospects if they considered their pupillage incomplete until they had passed one or two seasons of hard work in a well-managed malting business. If they were never called upon to take an active part in the making of malt, their knowledge would be invaluable in estimating the quality of the finished produce supplied to them for brewing purposes. Moreover, at any time they would be capable, if called upon, of supervising the malting trade, or of selecting and purchasing the barley required.—Country Brewer's Gazette.

ADDITIONAL MEMBERS OF THE NATIONAL ASSOCIATION.

Secretary W. H. Chambers of Hepburn, Iowa, informs us that up to December 11 the following grain dealers had signed the constitution and by-laws and become members of the Grain Dealers' National Association:

ILLINOIS.

F. D. Vorse, Neoga.
C. B. Congdon & Co., Chicago (50 elevators in Kansas and Nebraska).
G. S. Connord & Co., Elwin.
V. C. Elmore, Ashland.
Edwin Beggs, Ashland.
J. A. Montgomery, Macon.
W. W. Gilbert, Danforth.
Pratt & Co., Decatur.
E. G. Knight & Son, Monticello.
E. R. Ulrich & Son, Springfield (30 stations).
W. B. Newbegin, Blue Mound.
H. Ream & Son, Lostant.
Suffern, Hunt & Co., Decatur (6 stations).
Pratt-Baxter Grain Co., Taylorville (4 stations).
Mt. Pulaski Grain Co., Mt. Pulaski (7 stations).
J. A. Brown, of Rosenbaum Bros., Chicago, Ill.
Ed S. Richards, Chicago, Ill.
Ford & Metcalf, Illinois.
E. B. Hazen, Philo.
Turner-Hudnut Co., Pekin (14 stations).

INDIANA.

Blankenbaker & Co., Brook.
Hartley Bros., Goodland.
Esson & Cunningham, Brook.
McCray & Morrison, Kentland (5 stations).
W. D. Foresman, Foresman.
G. D. McLane & Co., Union Mills (2 stations).
Aaron Gardner, Cottage Grove.
Ross & Ross, Chalmers.
Puntney, Taber & Co., Remington.
J. F. McCormick, Ambia.
A. J. Yost & Co., Fowler.
O. O. Barnard & Son, Fowler.
Loughry Bros., Monticello.
J. C. Vanatta, Brookston.

IOWA.

D. N. Dunlap, Fontanelle.
McFarlin Grain Co., Des Moines.
W. H. Chambers, Des Moines.
G. A. Stebbins, Coburg.
B. A. Lockwood Grain Co., Des Moines.
Jay G. Dutton, Perry.
G. A. Pierson, Orient.
Sidney Elevator Co., Sidney.
J. A. Winkle, Bancroft.
J. Auracher, Shenandoah.
Hambleton Milling Co., Keokuk.
Bowen & Regur, Des Moines.
D. K. Unsicker Grain Co., Fremont.
M. T. Russell, Des Moines.
Wm. Scholes, Greenfield.
Wm. Cool, Cumberland.
D. Hunter & Co., Farragut.
N. Hodgson, Des Moines.
J. W. Sexton, Bridgewater.
G. J. Stewart & Co., Chariton, eight elevators.
F. M. Campbell, Randolph and Anderson.
Van Schoiack & Richy, Griswold.

KANSAS.

B. D. Williams, Highland.
La Crosse Lumber & Grain Co., La Crosse and Otho.
Smith, Prince & Co., Jamestown.
Greenleaf Bros., Atchison.

MARYLAND.

Hammond & Snyder, Baltimore.

MISSOURI.

Noble & Freda, Watson.
F. S. Bromfield, Craig.
R. M. Adams, St. Louis, Mo.
C. S. Maxwell, Clyde.

H. A. Koster, Platte City.
Brunson-Judd Grain Co., St. Louis.
Schreiner-Flack Grain Co., St. Louis.

NEBRASKA.

M. McSweeney, Dawson.
P. S. Heacock, Falls City.
P. F. Murray, Bloomfield.
Duff Grain Co., Nebraska City.
C. P. Barlow, Tekamah.
S. J. Brown, Liberty.
G. C. Doehling, Bruno.
John J. Murphy, Rodgers.
Harris & Co., Omaha (33 stations).
Harry McCandless, Nemaha.

NEW YORK.

Whitney & Gibson, Buffalo, N. Y.

OHIO.

J. W. Long, Florida.
Ed McCue, Pittsburg.
Clutter & Long, Lima (6 stations).
E. A. Grubbs, Greenville.
The Jay Grain Co., St. Mary's.

PENNSYLVANIA.

M. F. Baringer, Philadelphia, Pa.
E. L. Rogers & Co., Philadelphia, Pa.
D. J. Stewart, Pittsburg, Pa.

WISCONSIN.

A. Mathews & Co., Montfort.

This list should be five times as large as it is. Regular grain dealers should not procrastinate, but join immediately. Do not wait to see if the other fellows can make a success of it, but take hold with a firm determination that it will be a success, even if you have to do all the hard work.

First of all the Association must have a large membership. Join now and induce your neighbors and acquaintances to join.

A SHARP GRANGER.

"A fact well known to farmers is that the rows of grain on an ear of corn are always even in number," writes A. D. Catlin of Tolono, Ill. "There may be 8, 10, 12, 14 or 16 rows, but never 9, 11, 13 or 15. This fact and the knowledge of it cost several men in my neighborhood very dearly a few days ago.

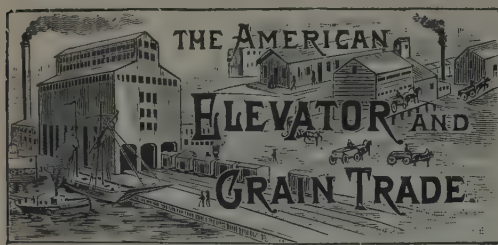
"A farmer who raises a small crop of corn, and who has always been regarded as of rather weak intellect, concluded that he saw a chance to make some bets. Early in the season he carefully scraped from a dozen ears of corn just formed one of the rows. The corn ripened, and the remaining rows grew together, so as to hide the evidence of the one removed ever having existed. Then the farmer offered to bet either that the others could not, or that he could find ears of corn with odd rows. He had no trouble in getting some very good bets on the latter proposition, but, of course, none on the first. He then found the ears he had fixed, and made as much money on the dozen ears as he did on the entire crop of corn. Now, any suggestion of corn with odd rows is provocation for a fight in that neighborhood."

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of December, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	2,419,765	6,877,745	1,348,276	2,390,845
Corn, bushels.....	6,156	2,186	1,031	2,186
Oats, bushels.....	453,412	308,419	70,810	22,447
Barley, bushels.....	185,633	180,892	264,816	269,793
Rye, bushels.....	151,896	50,759	79,093	62,568
Grass seed, pounds.....				
Flaxseed, bushels.....	370,931	417,742	369,456	224,009
Flour, barrels.....	26,200		248,740	
Flour production Duluth and Superior.....	131,495	194,705		

The grain receipts for the year 1896 at Peoria, Ill., have broken the record. The total for the year is 40,700,000 bushels, a gain of nearly three million over last year. The receipts of corn and oats were each over 18,000,000 bushels. Glucose to the amount of 436,000 barrels, and 194,558 barrels of spirits were shipped. An increase of 16,000,000 pounds of starch shipped was scored over last year.



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ADVERTISING

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., JANUARY 15, 1897.

SECURING AN ELEVATOR SITE IN NEBRASKA.

As was previously announced in these columns, the decision of the Nebraska State Supreme Court in the case of the Elmwood Farmers' Alliance vs. the Missouri Pacific Railway Co., has been reversed by the United States Supreme Court and remanded to the Nebraska Court for further proceedings. We will publish the decision next month. Judging from the carefully worded opinion of the United States Supreme Court, the farmers would have won had they asked for the use or lease of ground on right of way of company upon which to erect an elevator for the storing and shipping of grain and the accommodation of grain shippers. As is usual with farmers' suits the case was presented in a very bungling manner. The plaintiffs held high their heads and kept a vigilant eye upon the supreme authority of the state, which had been enlisted in their behalf, and in so doing completely lost sight of the rights of the company. They virtually asked that the railway company be compelled to transfer part of its right of way to them for their private use—a request that is preposterous and a violation of the rights of property.

If, after showing that the two elevators at Elmwood were not sufficient to handle the grain shipped from that station, and that the railway company had plenty of room to spare, as they did do, they had asked that the same privileges, and upon the same conditions, be granted to them as had been granted to the elevator men, the plaintiffs would no doubt have secured a site for an elevator upon the same terms as the other elevator men.

The case may be pushed further by the farmers, but success cannot be expected to crown

their efforts, for their fanatical paternalistic ideas ever prompt them to attempt to trample the rights of others in seeking to secure what is rightly due them.

AGRICULTURE IN THE SEMI-ARID DISTRICT.

In portions of Texas, Oklahoma, Kansas, Nebraska, the Dakotas and other Western states, are large areas which are not arid and yet which can never become even fair agricultural land by present methods of cultivation. It is generally assumed that irrigation is the only possible solution of the question; but this involves an expenditure of labor and money that makes the initial investment excessive. Nor is the water to be had in abundance in all cases. But now comes Mr. H. W. Campbell with a plan of cultivation which is said to produce excellent results on these semi-arid lands. As it involves no excessive outlay his plan should be given an extensive and exhaustive trial. If it does what is claimed for it, a great boon will be conferred on the states named above.

His plan, briefly, is to plow the land deeply at the start, cutting the furrows from six to nine inches in depth. Behind the plow is used a machine for packing the subsoil so as to retain the moisture. The ground is then gone over with a light spring-tooth harrow of peculiar form, so as to cut and pulverize the earth for a depth of not more than two inches. The crops are then put in and from then until the plants are too large to allow a free movement among them, the surface of the ground is kept finely pulverized by repeated scratching with the spring-tooth harrow. The packed soil retains the moisture, while the fine coating of earth on the surface acts as a blanket to ward off evaporation by sun and wind. The plan is so simple that a test of it practically costs nothing; and if successful millions of acres may be added to our productive area.

COLLECTING LANDLORD'S LIENS OF GRAIN BUYERS.

The law giving a landlord a lien upon grain grown upon his land by the tenant is not intended to assist the landlord in mulcting the regular grain dealer, but only to protect the landlord from being beat out of his rent by unreliable and unscrupulous tenants. By attempting to use the law to bleed the regular grain dealers the landlords bring it into disfavor with all fair-minded persons and themselves into disrepute. Fortunately for regular grain buyers, some of the landlords who have tried their hand at making buyers pay for grain a second time have failed and found it necessary to pay heavy court expenses instead.

Some of them have been so confident of mulcting the grain dealer that they have sued for the price of the grain, although admitting that they knew their tenant was disposing of his crop. No court or jury will assist in any such flim-flam game. The landlord is bound to stop the sale of grain upon which he has a lien. If he will not take every reasonable precaution to prevent the closing of a sale of which he is cognizant, he cannot expect the courts to assist him as against an innocent party. A notice to the prospective grain buyer of the tenant's indebted-

ness for rent would prevent the disposal of the grain in that market. The difference in prices would seldom warrant the hauling of grain to distant markets.

The regular buyer is bound by self interest to keep a vigilant eye on tenants and to make inquiries of landlords regarding the liability of tenants. An ounce of prevention is worth a pound of cure when it comes to buying grain covered by a landlord's lien. A sign posted over each dump or the scales to the effect that, "TENANTS MUST SHOW RELEASE FROM LANDLORDS OR GRAIN WILL NOT BE PAID FOR," might prove repulsive to some tenants, but it would also prove a great protection to the regular buyer. If carried out with such farmers as he knew to be tenants, he would show his intention to avoid buying grain covered by landlord's lien, and he would be looked upon with favor by any court or jury in suit brought by a landlord to collect amount of lien from him.

A NEW SCHEME.

The land-holding and agricultural classes of Great Britain make no secret of wanting a duty on wheat and other breadstuffs as a measure of protection to the British farmer. But the enormous expansion of British manufacturing and commercial interests acts as a check, because these interests are largely dependent on cheap food. Consequently every once in a while someone comes forward with a compromise measure which divides the sop, or endeavors to do so, and gives a portion to each. The latest plan of the British agrarians to protect the home grower of wheat is one presented by Mr. Hooley, an eccentric millionaire. He suggests that Parliament levy a duty of five shillings per quarter on imported wheat, which would be equivalent to 15 cents per bushel. The proceeds of this tax he would devote to a pension fund to provide all indigent persons above 60 years with a weekly pension of fifteen shillings.

Of course the proposition to devote the money to old age pensions is of the nature of a bribe to those whose poverty would otherwise make them interested in keeping bread cheap. Probably this plan will come no nearer realization than other plans propounded by the land-holders. But it is certainly unique in offering to give the entire proceeds of the tax, substantially, to the people who would vote for it.

THE NEW KANSAS ASSOCIATION.

As is announced in our "Communicated" department, the regular grain dealers of North-eastern Kansas have organized a strong local association and the secretary is delighted by the remarkable success already attained. The movement to lift the trade up out of the mire by combined effort is rapidly gaining new supporters and strength. With a number of well organized local associations and the National Association to handle matters of importance to all dealers, the trade should soon receive some relief from the impositions which have been growing in number and extent for half a century.

The Kansas Association truly merits the ardent support of every regular dealer of its district. It has declared in no uncertain terms against the transient buyer and has adopted al-

most verbatim the constitution and by-laws of the National Association. The wording of the article relating to membership is the same and the spirit of all the other articles is retained, but the details are changed to suit the needs of the local association. The success of the dealers of this district in organizing should prompt the dealers of other districts to follow suit.

COMPENSATION FOR COUNTRY ELEVATOR MEN.

One of the first things which the Grain Dealers' National Association should take up and push to a successful termination is the securing of compensation from carriers for regular country elevator men who receive bulk grain from all comers for shipment and store free three days. The carrier furnishes a freight depot and an agent to handle and care for all package freight, and at some terminals furnishes large elevators and a cut rate to shrewd dealers who will send large quantities of grain over the line.

There is no plausible reason why the regular country elevator man who keeps open house the year around, and in reality acts as a soliciting freight agent for the railroad company, should not be paid at least two cents for every bushel loaded into its cars. The local freight agent who cares for package freight is paid a salary and provided with a storehouse and office, while the agent who provides his own storehouse and facilities for handling bulk grain is charged rent for ground and required to sign a lease releasing carrier from all liability for damages by fire caused by sparks from its locomotives.

The bulk freight generally amounts to many times the package freight and the receipts from it are greater, hence, in fairness to the agent who really handles it, he should be paid a pittance for his service.

NEW YORK'S GRAIN TRADE.

It would appear that the trunk lines centering in New York City have at last appreciated the fact that New York's grain trade was in process of transfer to other ports. For a number of years it has seemed to be the policy of the roads to handicap New York, with the natural result that grain has sought outlets where extra charges upon the shipper were moderate or did not exist at all. The New York Produce Exchange protested against the differential rate in favor of Southern ports, failing to grasp the fact that the charges put upon the transfer of grain in New York, and consequently upon the shipper, constituted one of the chief evils. It now appears that the railroads have parted company with the transfer pool. The elevator slips have been dredged out, and for the first time in years ocean steamships have been loaded at the elevators direct, without lightering. Evidently the roads have seen that in order to carry grain to New York they must, so far as they can, make New York a desirable port for the shipper to reach.

It is possible that the meeting of the New York Legislature and some of the radical legislation proposed has quickened the parties most concerned, in an effort to render intervention unnecessary. One bill providing for state elevators at Buffalo has been strangled, but another one is to be introduced. The purpose is to

compel the elevator combination to conform to the law fixing the charge for transferring at $\frac{3}{4}$ of a cent per bushel. At present they evade it by declining to accept grain for direct transfer only, and insisting on ten days' storage charge as well. Possibly the interests arrayed against the Erie Canal have seen that the grain trade will insist on relief from some of the burdens it encounters between the lakes and the sea. The building of state elevators is a radical measure, but those interested in the canal and in the grain trade may be pardoned some degree of desperation. They have grown weary of temporizing. Perhaps the threat of building state elevators for transfer purposes at a nominal charge will have a wholesome effect in removing some of the charges and extortion which threaten New York's export grain trade.

SHRINKAGE OF CORN IN STORE.

It is a matter of surprise that so few experiments have been made, or perhaps we ought to say, the results of such experiments so rarely published in regard to the loss of weight in drying out. That grain suffers an actual diminution in weight from the time it goes into store in the fall, up to the next summer, is taken for granted. The Cincinnati Chamber of Commerce has adopted a rule by which 68 pounds is recognized as the weight of a bushel of corn after January 15. This rule places the shrinkage at two pounds from husking time to the date named. Some "rules of thumb" give the shrinkage at a pound a month for six months, while some farmers contend that corn will dry out from 10 to 20 per cent. between November and the following summer. This latter figure is, of course, extravagant, unless the corn were damp and especial care taken in drying it out.

Such well authenticated cases of experiments as we have seen show why such a diversity of opinion exists. It is simply because grain, and especially corn, follows no fixed rule in drying out. After corn has been husked and placed under cover, but exposed to atmospheric influences, as it generally is, it absorbs or parts with moisture according to the condition of the weather, and gains or loses weight accordingly. It is well known that wheat shipped from California during the dry weather gains very materially in weight by the time it is unloaded in England. Through most of our corn country we have a climate that goes to extremes of damp and dryness. Should the contents of a crib of corn be weighed during a long dry spell, and then again after a week of soft, muggy weather, the scales would show a difference in weight that would probably surprise most people. Of course corn will not dry out beyond a certain point nor absorb moisture beyond a given amount, unless actually made wet; but the margin is wide enough to account for some of the figures given, though it is dependent on the weather and not the length of time the corn has been in store.

On October 25, 1895, a farmer filled a burlap sack with ear corn and on weighing it found the weight to be 153½ pounds. On July 1, 1896, the weight showed 150 pounds. The same year another farmer took a bushel of ear corn in October and hung it in a dry place, where it was subject only to the moisture in the atmosphere. He weighed it every month, noting the weather as well. The weight in October was 70 pounds;

in November, 66 pounds; in December, 69 pounds, with no variation in weight until March, when it again weighed 70 pounds. In April it weighed 66, in May 64, in June 66, and in July 65 pounds. In August he shelled the corn and had 54 pounds of corn and 11 pounds of cob. In November when the corn lost 4 pounds the weather was very dry. In March, when it regained its original weight, it was moist, and the weather in December and January had been moist, and in February very cold. The gains and losses appeared due entirely to the weather, responding to its character to a remarkable degree. Neither of the experiments cited above was satisfactory as to quantity; nor did they reproduce exactly the conditions of ear corn in storage; but the remarkable gains and losses of the grain in the second instance show that the weather is the controlling factor. We make no comment except that a period of damp, muggy weather is not a good time to buy corn.

The new anti-option law in Germany went into effect on January 1, according to program. The first and, so far as we have seen, the only result was that the exchanges closed and the members demanded a repeal of the law. The actual working of the law ought soon to be apparent. It contains some excellent features; but these go for naught, because what is the use of having wholesome regulations when the law aims at and accomplishes suppression?

PUBLIC ELEVATOR MEN MUST NOT DEAL IN GRAIN.

After a well-fought battle in the courts the Chicago Board of Trade has secured a just decision forbidding the public elevator men, Class A, to deal in grain stored in their own houses. The reading of the part of the decision published in this number will convince anyone of the growing greed of the public elevator men of Chicago and the ultimate control of the grain trade of the city by them, if not interfered with.

A halt should have been called long ago. The country shippers, the commission men and, in fact, everyone connected with the buying and selling of cash grain in this market, have suffered from the effects of the dealing in grain by the public elevator men. These bailees have used their influence to depress prices when they desired to buy to fill their empty bins and have exerted themselves to advance the prices when the removal of any grain from their storage-earning bins was contemplated.

Whether or not they have classified the line grade and top grade grain and handled it to the disadvantage of the storers of grain, who paid for the service, does not matter, they had the temptation to do so and could have yielded without being detected save by the loss account of their patrons. If they are to act as the public's servants, they must care for the public's property, not utilize it to their own advantage and profit. If it is their burning desire to deal in grain without giving up their public elevator business, it would be well for them to erect a private elevator to handle their own grain, and operate the public elevators for the exclusive service of their patrons.

The case has been appealed to the Supreme Court, but it is not likely that the decision will be reversed.

EDITORIAL MENTION

Sign the application blank on the last leaf of this number.

Secretary Chambers of the Grain Dealers' National Association is now located at Des Moines.

Several meetings of grain dealers have been held at Council Bluffs recently, and the good work goes on.

There are said to be over 100 varieties of corn, but all of them have one characteristic in common just now; they are cheap.

A committee of the Winnipeg Grain Exchange has been working on a scheme for insurance of grain on a coupon system.

The Chicago insurance agents have practically ceased to write "open" insurance on grain and are now writing policies for a specific term.

Attend the meeting of the Grain Dealers' Association of Northeastern Kansas at Atchison, Wednesday, January 20. No regular Kansas dealer can afford to remain at home.

Chicago grain dealers, one and all, have firmly resolved that the grain inspection department shall be divorced from politics and politicians, who frequently in the past have proved their incapacity for the business.

Burning corn for fuel is an old story in Iowa, Nebraska and Kansas, but it seems rather strange to read of its being used that way in Minnesota and South Dakota, which a few years ago were supposed to be outside the corn belt.

The dealers who are protesting so vigorously against bleached oats must have had a very heartrending experience with a bleached blond. There is really no occasion for their protests. The oats are not injured in the least and the bleachers are just as much entitled to a reward for the service rendered as are the cleaners and clippers.

And now the persistent anti-bucketshop men have attempted to indict the Western Union Telegraph Company for leasing wires to bucketshop keepers for an unlawful purpose. With the protests of swindled customers and the ever-pursuing anti-bucketshop men, the keepers of these joints do not have much rest. The crop of suckers continues large.

Agencies are at work which seem determined to give Chicago's grain trade a black eye. The pooling of the lake lines is one of them. If the pool is a success, hereafter there will be no competition among the lake lines. Further, the pool is to act in harmony with the Joint Traffic Association, and the element of all-rail competition will also be eliminated. The activity of the Southern lines is another disturbing element in the situation. Perhaps the transportation lines, both lake and rail, will awake to the fact that

they cannot afford to let Chicago suffer from discrimination.

Missouri has reduced the weighing charges at grain centers, but the inspection fees are still very high. However, they may be reduced also in the near future.

An effort is to be made to induce the Iowa Legislature to enact a law making the rate for a ten-word message sent from one point in the state to any other point within the state and on the same line of the receiving telegraph company, 25 cents. This is a reduction of 15 cents. Here is a splendid opportunity for the local grain dealers' associations to do some effective work in the interests of their members. No time should be lost, but delegations should be sent to the Legislature immediately.

The case of the Interstate Commerce Commission against ex-President Reinhart of the Santa Fé, for the payment of rebates to shippers, failed miserably. The indictments were procured several years ago and the commission presumably has been collecting evidence. That the rebates were paid is hardly denied, but the prosecution was unable to get at evidence needed to prove the fact. It is this sort of thing that makes the average man tired at attempting regulation that does not regulate.

Report comes from Washington that Russia has repeated the proposition to this country looking to an agreement for regulating the price of wheat. Whether this second proposition comes in the bald form of the first one, is, of course, a secret of the State Department. It seems, however, that Secretary Morton's letter on the subject was not accepted as final by the Russian Government. If a satisfactory solution of the low price problem is found in governmental agreement, we may look to have the tides regulated by treaty and the rainfall settled by diplomacy.

The Farmers' Alliance of Minnesota has, by resolution, declared that the Railroad and Warehouse Commission of that state is a useless luxury, or a luxurious nuisance. It is not so very long ago that the farmers of Minnesota were demanding an increase in the powers of the commission. And in the same resolution with which they now denounce the state and national commissions, they "demand that the government, state and federal, shall assume a substantial control and regulation of all transportation agencies." Perhaps there is no inconsistency here, but it seems to squint that way.

Settling the Venezuela dispute is a small job, apparently, compared with settling the insurance policies on a big grain elevator that has burned. Elevators A and B of the Chicago and Pacific Elevator Co. burned October 27. About every week since then something has developed and kept the insurance men stirred up. The last rumor was that the insurance would all have to be adjusted again, as it was found that 95,000 bushels of grain had been transferred from one house to the other. This caused great joy among the people who had policies on one of the houses and corresponding depression among those who held policies on the other house, until it developed that both houses had more

than enough grain to exhaust all the insurance. The last big elevator fire was "in the papers" for three months. Is there anything special in the burning of an elevator that provokes talk and discussion? It looks like it.

Col. William Henry Hatch, ex-congressman and author of the famous Hatch or "Anti-Option" bill, died at his home near Hannibal, Mo., on December 23. Col. Hatch was a man of great force of character and took a leading part during his long congressional career in all legislation affecting the interests of farmers. He took the defeat of his anti-option bill, which he regarded as a great panacea for low prices, very much to heart, though he endeavored to be philosophical about it. In any event, he was a farmer in fact as well as name, which cannot be said for some of the farmer's alleged friends in Congress and out of it.

The Grain Shippers' Mutual Fire Insurance Association has at last been incorporated, and Secretary Babcock informs us that many applications for insurance are being received. He thinks it will be only a short time until the company has the \$100,000 required to write risks. An idea of what it is attempting to do for the owners of elevators may be gleaned from the articles of incorporation published in this number. It is not organized for profit, but to save insurance fees to members who now patronize stock companies. As the business is to be confined to the state of Iowa, the company should receive the support of every elevator man of the state and success made certain. If it succeeds others will be started in other states.

If the grain dealers who signed the declaration in favor of organizing a grain dealers' national association and have failed to join now that a strong association has been started on the right lines have any reasons for not giving it their support, we would be pleased to hear from them. They should stand by their convictions or give some reason for deserting. The trade needs the reforms for which the association is working just as much to-day as ever, and the association needs the hearty support of every regular dealer. No dealer who feels the necessity of his business being relieved from the impositions heaped upon it can afford to trust to the success of the association and to the possibility of non-members profiting as much as members. If he wants relief he should go about getting it in earnest—join the association, take off his coat and work with a determination that it shall succeed.

The Indiana Farmer figures that farmers in that state must get 50 cents per bushel for corn in order to make it pay. It claims that the cost of producing thirty acres of corn would be \$450, while at 40 bushels per acre the total product would be only 1,200 bushels. The cost of production would therefore be 37½ cents per bushel. Of course corn at present prices would not pay. But the Indiana Farmer starts with the proposition that interest on the value of the land must be figured as part of the cost of production and that all the work is done by hired help. On any such basis there are very few small businesses that can be said to pay. And yet it is very certain that they do not all go into bank-

ruptcy any more than the farmers do. The Farmer's figures certainly show that a man with a big mortgage and who hires all his work done cannot make money raising corn in Indiana or anywhere else; but they are a long way from proving that every bushel of corn is sold at a loss.

The bill introduced by Senator Sherman providing for uniform standards of grain under the supervision of the Secretary of Agriculture came up for debate in the Senate on January 7. This is the same old bill that has bobbed up in House and Senate every session for a long while. There is apparently some mystery about it. Senator Sherman says he introduced it by request. It has come up before successive Congresses in a way that looks as if someone had an interest in keeping up an agitation until it becomes a law. But what on earth the bill is expected to accomplish if enacted into law, passes our comprehension. The provisions of the bill look entirely innocent. It is not proposed to supplant present grades and classifications at all, but simply supplement them with a national standard for interstate commerce when no other standard is agreed upon. We have the word of Senator Gear of Iowa that the grain producers are for the bill, and of Senator Allen of Nebraska that the grain producers are against it. There is nothing mandatory about the bill that we can detect. The Secretary of Agriculture is merely to establish national grades and the people can use them or let them alone as they see fit. Possibly the bill may be the hobby of some agricultural body that believes the interests of farmers would be served by its passage. Or somebody may have a private ax to grind to an edge, for which even the smart legislators may unwittingly turn the grindstone. However that may be, the bill apparently contains no harm to public interests, even if it would do no good.

According to the report of the Bureau of Statistics, breadstuffs exported from the United States in 1896 were valued at \$176,027,595, against \$121,571,552 in 1895. During December 2,600,309 bushels of barley, valued at \$1,033,625, were exported, against 553,222 bushels, valued at \$263,034, in December, 1895; and during the year there were exported 16,278,780 bushels, valued at \$6,453,073, against 3,539,096 bushels, valued at \$1,484,211, in 1895. Corn amounting to 14,875,073 bushels, valued at \$4,693,431, was exported in December, against 10,646,479 bushels, valued at \$3,890,106, in December, 1895; and during the year 128,518,437 bushels, valued at \$42,856,126, were exported, against 61,469,669 bushels, valued at \$27,665,393, in 1895. Oats aggregating 4,026,234 bushels, valued at \$982,108, were exported in December, against 202,717 bushels, valued at \$50,859 in December, 1895; and during the year exports were 30,378,552 bushels, valued at \$7,745,974, against 2,019,858 bushels, valued at \$592,423, in 1895. Rye aggregating 498,954 bushels, valued at \$228,236, was exported in December, against 80 bushels, valued at \$40, in December, 1895; and during the year 5,323,889 bushels, valued at \$2,266,993, were exported, against 837 bushels, valued at \$447, in 1895. Wheat amounting to 8,851,650 bushels, valued at \$7,709,949, was exported in December, against 5,798,292 bushels, valued at \$3,604,469,

in December, 1895; and exports for the year were 82,748,191 bushels, valued at \$58,611,030, against 66,371,200 bushels, valued at \$40,638,380, in 1895. Exports of corn meal in 1896 and 1895 amounted to 299,352, against 262,232 barrels; oatmeal, 40,676,350, against 35,051,681 pounds; wheat flour 15,731,129, against 14,187,483 barrels in 1895.

It is with regret that we chronicle the retirement from the field of special journalism of the New York Produce Exchange Reporter. The publishers announce that under present conditions the continuance of the paper is impossible. Every day, they state in their valedictory, New York is getting further away from the producer of breadstuffs and provisions, and this has lessened the usefulness of the Reporter. Further, they admit that the rapid increase in the use of telegraphy has lessened the demand for a weekly trade paper: The Reporter has a history extending back to 1854. It was one of the first special trade papers in the field. It was founded by the late Wm. H. Trafton, Senior, and for forty years had a more or less prosperous career. The influences referred to above have gradually undermined it, and as they seemed to be permanent, the publishers thought it best to discontinue the paper rather than sustain a loss indefinitely by continuing its issue. The Reporter was the oldest of our exchanges, and we part from it with genuine regret.

THE ASSOCIATIONS.

There are some near-sighted grain men who still persist in maintaining that the local associations can do all the work there is to be done. They overlook the fact that all matters of national importance are of like interest to every member of the grain trade, and each should contribute his share to the expenses of the work.

The tariff on barley, hay and other cereals is of importance to every member of the trade, likewise national legislation, such as the national standards for grain, amendment of the Interstate Commerce Law and everything relating to interstate commerce, improvement of the waterways, improvement or reform of methods in vogue at any large grain market. Such matters cannot be changed to the advantage of one dealer without all profiting thereby, and it is right that everyone profiting by the work of the National Association should contribute to its support. The man who hopes to profit by the work without contributing to it, is surely supremely selfish.

The state or local associations will find plenty of work in their own territory without even looking for it, but they cannot expect dealers outside of their territory to contribute to the reform of trade practices within it, because the outsiders would not profit by such reforms and would not be interested in the work. There is a distinct field for work for each and there should be no fear of one ever conflicting with the other.

There have been unprecedented shipments of corn from the middle western states to the Pacific Northwest this season. It is said the greater part of it is from Nebraska.

Secretary Trout of the Kansas City, Kan., Board of Trade, reports car lot inspections of grain during the year ending December 24 as follows: Wheat, 9,906; corn, 9,273; oats, 1,651; rye, 132; barley, 35.

Trade Notes

The Chicago Rubber and Belting Co. has been incorporated at Chicago with a capital stock of \$2,500. The incorporators are: Samuel G. Wickery, Joseph W. Hiner and John E. Waters.

Geo. N. Reinhardt & Co., hay, grain and feed commission merchants of Melrose Station, New York City, are mailing to all who apply for it a neat glass paper weight which serves as their business card, and gives a view of their remodeled warehouse.

The Brooklyn Hay & Grain Co. of Palmers Dock, Brooklyn, N. Y., receivers of hay, straw, grain, etc., has sent us one of their pretty wall calendars for 1897. The company sells hay, straw, etc., on all markets of New York Harbor. The officers of the company are Anson Ferguson, president; Arthur L. Crum, manager; Culver Ferguson, treasurer; E. Vreeland, secretary.

The Weller Mfg. Co. of Chicago, Ill., has recently removed its office from the first to the second floor. The old office has been fitted out as a sample room, and contains a complete line of conveying machinery and other specialties which the company manufactures. The company has also enlarged its plant by the addition of a full line of machinery of improved pattern, for the manufacture of iron pulleys.

It is not supposed that an advertiser should necessarily begin with full, or even half-page ads, but start. Get a pneumatic tire on you and take a place in the great commercial handicap. You can't run unless you are fixed for the race. Josh Billings said: "A postage stamp is a mighty small thing, but it has the ability to stick to one thing until it gets there." Advertise your business, and be a stamp. Stick to it.

We have received a neat little calendar from Lederer Bros., commission merchants of Baltimore, Md., who write us: "In looking back over 1896 we are glad to note that our grain trade shows considerable improvement. The quality of the wheat was such that shippers have often preferred to send for sale after arrival. The tendency of values in the last half of the year has been upward, and hence customers have been pleased with results. The new crop of corn is now cured, and inspections, as a rule, are now satisfactory to shippers. Our oats sales by sample to local dealers have been larger than ever before."

Mr. Cramp, the shipbuilder, claims that the chemist employed by him has discovered that cornstalks could be made worth \$2 a ton, or \$5 an acre, by mechanism which would extract from them alcohol, cellulose, a material for matings, carpets, paper, smokeless powder, and cattle food, superior to any other.

The so-called pure seed bill introduced by Congressman Cook appears to be a bill for the inspection of imported seeds of grasses, clovers and other forage plants, in order to prevent the introduction and spread of noxious weeds in this country. In order to make a system of inspection practicable, the bill provides that such seeds shall be allowed to enter only at the ports of Boston, New York, Philadelphia and Baltimore, under regulations prescribed by the secretary of agriculture. It provides that such importations shall be inspected by experts appointed for that purpose by the secretary of agriculture.

The Crystal Palace Flouring Mills Co. of Texas recently filed suit against L. Butterfield of Denver, Colo., over the old trouble of unfulfilled contract. It is alleged that defendant corresponded with plaintiff at the solicitation of a Santa Fe representative, and offered to sell 3,000 bushels of spring wheat, to grade No. 1, and to weigh 59 pounds to the bushel, at a delivered price of 76½ cents per bushel. The correspondence took place in September and October, and after the contract had been made it is claimed that the plaintiff refused to make shipment of the wheat because the railroad would not make a rate of 25 cents per 100 pounds, as had been expected. Damages to the amount of \$900 are asked for.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since December 15 has been as follows:

December	No. 2 ⁺ R. W. H. T.		No. 2 ⁺ S. P. H. T.		No. 2 CORN.		No. 2 OATS.		No. 2 RYE.		No. 3 ⁺ BARLEY.		No. 1 ⁺ FLAXSEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15	90	91	22 1/2	23	17 1/2	17 3/4	39 1/2	39 3/4	33	35	75	75		
16	87	87	22 1/2	23	17 1/2	17 3/4	38 1/2	39	33	35				
17	87	87	22 1/2	23	17 1/2	17 3/4	38 1/2	39	33	35				
18	87	89 1/2	22 1/2	23 1/2	17 1/2	17 3/4	38	38	33	35	74	74		
19	89	89	22 1/2	23 1/2	17 1/2	17 3/4	37 1/2	37 1/2	32	33	73 1/2	74		
20														
21	88	89	22 1/2	22 1/2	17	17	37	39 1/2	33	34	71 1/2	72		
22	89	89	22 1/2	22 1/2	16 1/2	17	37	37	33 1/2	31	72	72		
23	91	91	22 1/2	23	17 1/2	17 3/4	37 1/2	38 1/2	33	34	71	74		
24	88 1/2	91	22 1/2	23	17 1/2	17 3/4	37 1/2	37 1/2	33 1/2	34				
25														
26														
27	90	90 1/2	22 1/2	22 1/2	17	17 1/2	37	37 1/2	33	34	73 1/2	73 1/2		
28	91 1/2	91 1/2	22 1/2	23	17	17	37 1/2	37 1/2	33 1/2	35				
29	90 1/2	92	22 1/2	23	17 1/2	17 3/4	37 1/2	37 1/2	34	31	73	73		
30	90 1/2	91	22 1/2	23	16 3/4	17	37 1/2	37 1/2	33	33				
31														
Jan.														
1			23	23	16 3/4	16 3/4	38	38	24	32	75	75		
2														
3														
4	91	91 1/2	23	23 1/2	16 1/2	16 1/2	38 1/2	39 1/2	32	34	75	75 1/2		
5	90	90	23	23 1/2	16 1/2	16 1/2	37 1/2	37 1/2	34	34	73 1/2	73 1/2		
6	90	90	23	23 1/2	16 1/2	16 1/2	37 1/2	37 1/2	26	34	73	73		
7	88	90	22 1/2	23			38	38	24	31 1/2				
8	88 1/2	88 1/2	22 1/2	23			37 3/4	37 3/4	24	34				
9			20 1/2	20 1/2	22 1/2		38	38						
10														
11			22 1/2	22 1/2	15 1/2	16 1/2	37 3/4	37 3/4	24	32				
12	90	90	80	80	22 1/2	22 1/2	16 1/2	16 1/2	37 3/4	25	34			
13	100 1/2	100 1/2	79 1/2	79 1/2	22 1/2	22 1/2			37 3/4	24 1/2	35			
14	89 1/2	89 1/2	22 1/2	22 1/2	17 1/2	17 1/2	37 1/2	38	24 1/2	32	76	76		

*Holiday. †Free on board, switched or delivered. ‡Free on board or switched. §On track or to go to store.

During the week ending January 9 Prime Contract Timothy sold at \$2.65@2.70 per cental, Prime Contract Clover Seed at \$8.00@8.25, Hungarian at \$0.45@0.60, German millet at \$0.55@0.70, buckwheat at \$0.50@0.62 per 100 pounds.

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Jan. 9, 1897, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, Bu.	Oats, bu.	Rye, bu.	Barley, Bu.
Albany		100,000	150,000		5,000
Baltimore	276,000	1,947,000	946,000	283,000	
Boston	1,484,000	638,000	197,000	1,000	49,000
Buffalo	2,055,000	119,000	335,000	148,000	1,434,000
do. afloat	334,000	225,000	292,000	95,000	65,000
Chicago	13,340,000	5,331,000	5,319,000	1,201,000	137,000
do. afloat	50,000	536,000	82,000		
Cincinnati	8,000	1,000	13,000	6,000	130,000
Detroit	380,000	300,000	27,000	50,000	26,000
Duluth	3,073,000	8,000	960,000	432,000	272,000
do. afloat	402,000			53,000	
Indianapolis	189,000	119,000			
Kansas City	488,000	108,000	201,000	17,000	
Milwaukee	342,000	4,000	10,000	324,000	98,000
do. afloat					86,000
Minneapolis	19,069,000	20,000	672,000	60,000	89,000
Montreal	447,000	35,000	160,000	49,000	48,000
New York	6,195,000	5,697,000	2,796,000	209,000	967,000
do. afloat	1,488,000	416,000	197,000	39,000	419,000
Oswego	39,000				105,000
Peoria	164,000	388,000	332,000	24,000	59,000
Philadelphia	593,000	1,305,000	147,000		
St. Louis	2,027,000	2,142,000	365,000	64,000	14,000
do. afloat		138,000			
Toledo	1,201,000	337,000	479,000	124,000	
do. afloat					
Toronto	228,000		56,000		94,000
On Canals					
On Lakes					
On Miss. River		282,000			
Total	53,872,000	20,526,000	13,686,000	3,159,000	4,076,000
Corresponding date 1896	68,945,000	6,181,000	6,369,000	1,532,000	3,731,000

WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the twenty-eight weeks ending Jan. 9, for the last three years, according to the Cincinnati Price Current were as follows:

	1896-7.	1895-6.	1894-5.
St. Louis	9,638,000	9,364,000	8,271,000
Toledo	6,485,000	5,172,000	12,565,000
Detroit	2,420,000	1,698,000	3,172,000
Kansas City	5,894,000	6,440,000	5,725,000
Cincinnati	712,000	693,000	693,000
Winter	25,149,000	23,367,000	30,367,000
Chicago	16,310,000	18,365,000	20,887,000
Milwaukee	5,553,000	6,778,000	4,533,000
Minneapolis	43,115,000	51,729,000	36,866,000
Duluth	37,344,000	41,447,000	26,543,000
Spring	102,423,000	118,317,000	88,049,000
Total, bus. 23 weeks	127,572,000	141,684,000	118,416,000

It is estimated that the shipments of corn from Central Illinois to New Orleans this winter will be double those of last winter.

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the month of December, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels	110,250	131,000	90,200	129,450
Corn, bushels	1,837,700	2,116,580	243,050	889,450
Oats, bushels	1,484,500	1,193,000	1,409,350	1,304,650
Barley, bushels	317,800	360,500	175,800	291,800
Rye, bushels	42,000	21,800	13,200	3,000
Mill Feed, tons	300	585	6,583	7,723
Seeds, pounds	178,000	210,000	90,000	90,000
Broom Corn, pounds		480,000		504,280
Hay, tons	5,130	6,230	1,900	1,700
Flour, barrels	29,760	27,900	25,700	28,500
Spirits and Liquors, bbls.	475	675	24,333	21,482
Syrup and Glucose, bbls.	1,300	700	43,485	50,995

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the month of December, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels	587,050	1,418,185	120,845	400,700
Corn, bushels	81,900	117,000	4,750	7,800
Oats, bushels	739,000	745,000	542,700	725,322
Barley, bushels	1,170,200	1,327,160	627,244	515,843
Rye, bushels	296,960	118,915	10,200	34,400
Grass Seed, pounds	863,645	496,805	789,280	227,580
Flaxseed, bushels	42,535	61,000	39,820	50,260
Hay, tons	2,184	2,801	227	168
Flour, barrels	480,660	444,090	675,031	558,721

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the month of December, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels	61,568,870	65,436,390	9,347,490	12,941,620
Corn, bushels	1,536,360	1,108,840	509,350	212,380
Oats, bushels	10,619,160	5,481,230	7,920,420	3,115,870
Barley, bushels	2,150,090	867,230	764,620	284,940
Rye, bushels	692,740	376,380	556,630	207,010
Flaxseed, bushels	1,499,030	1,784,290	985,260	986,490
Hay, tons	21,637	28,817	743	1,275
Flour, barrels	140,263	136,045	12,757,135	10,073,713

RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco, Cal., during the month of December, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, centals	1,279,326	506,574	1,232,984	1,076,058
Corn, "	34,928	13,645	3,901	5,576
Oats, "	87,127	83,720	2,695	2,271
Barley, "	433,055	200,033	307,245	192,836
Rye, "	5,270	5,950		
Flaxseed, bushels	1,300	1,884		
Hay, tons	7,193	8,610	1,087	748
Flour, barrels	162,411	126,643	134,588	92,130

RECEIPTS AND SHIPMENTS AT CINCINNATI.

The receipts and shipments of grain and hay at Cincinnati, Ohio, during the month of December, as compared with the same period of the preceding year, were, according to C. B. Murray, superintendent of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels	82,956	128,303	38,817	105,714
Corn, bushels	739,338	406,110	353,204	84,992
Oats, bushels	360,530	258,231	158,580	77,728
Barley, bushels	231,190	196,271	255	15
Rye, bushels	40,652	41,634		
Clover Seed, bags	4,727	1,374	8,808	14,337
Timothy Seed, bags	950	184	224	296
Other grass seeds, bags	2,652	2,409	1,919	1,771
Hay, tons	6,932	5,671	1,992	1,327
Flour, barrels	217,163	288,489	110,027	250,090
Malt, bushels	32,063	47,670	47,567	40,124

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during December, 1896 and 1895, of seeds, hay and broom corn:

Receipts.	Timothy, lbs.	Clover, lbs.	Other Grass Seeds, lbs.	Flax-seed, bu.	Broom Corn, lbs.	Hay, tons.
1896	2,913,781	1,055,357	441,230	698,691	1,647,930	32,149
1895	2,521,332	441,004	354,159	1,041,223	2,021,370	34,962
Shipments						
1896	1,909,684	1,808,504	892,312	224,895	728,060	2,649
1895	2,324,020	200,979	527,146	540,291	1,786,412	6,847

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month of December, as compared with the same period of the preceding year, were, according to George H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	436,676	953,764	637,742	499,256
Corn, bushels.....	3,916,996	1,437,444	1,780,676	1,145,336
Oats, bushels.....	1,289,224	677,132	290,500	224,861
Barley, bushels.....	228,750	144,972	38,270	4,530
Do, bushels.....	14,026	22,400	18,190	21,220
Hay, tons.....	21,901	26,140	6,781	11,864
Flour, barrels.....	91,810	103,660	114,196	162,376

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector D. W. Andrews, the grain received at Chicago during the month of December, 1896, was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.				No G'de.
	2	3	4	1	2	3	1	2	3	4	
C. B. & Q.	1	1		3	18		23	30	47		3
C. R. I. & P.	1			3	20		8	11	17		3
Chicago & Alton.				3	3		3	2	5		4
Illinois Central.	1			4	2		3	4	5		4
Freeport Div., I. C.											
Galena Div., C. & N. W.	1			4	3		2	4	2		
Wis. Div., C. & N. W.	1						25	5			
Wabash.											
C. & E. I.							2	2	3		
C. M. & St. P.	17	4					19	14	1		1
Wisconsin Central.	1										
Chicago & Great West.				1	17						
A. T. & S. Fe.				6	14		8	4	7		
E. J. & E.							18				
Through and special.				2			8	10			
Total each grade.	19	8	1	29	77		99	106	99		9
Total winter wheat.	28			108							313

SPRING WHEAT.

Railroad.	Colo- rado.		Northern.		2		3		4		No Grade.	White.	Mixed Wheat.
	2	3	2	3	2	3	2	3	2	3			
C. B. & Q.	3	2			1	77	11		4	5			
C. R. I. & P.					40	40			1				
Chicago & Alton.													
Illinois Central.					1								
Freeport Div., I. C.					1								
Galena Div., C. & N. W.	32	6			3	186	47						
Wis. Div., C. & N. W.	7				1	2	5						
Wabash.													
C. & E. I.													
C. M. & St. P.	1				117	2			1				
Wisconsin Central.													
Chicago & Great West.	1												
A. T. & S. Fe.													
E. J. & E.													
Through and special.					8	6	11		1	44			
Total each grade.	44	8	9	12	441	119	47	4	6				
Total spring wheat.	52				628		10						

CORN.

Railroad.	Yellow.		White.		2		3		4		No Grade.
	2	3	2	3	2	3	2	3	2	3	
C. B. & Q.	149	170	6	5	122	173	393		10		
C. R. I. & P.	69	44	3	5	160	80	108		35		
Chicago & Alton.	121	302	21	111	80	431	89		2		
Illinois Central.	140	416	16	106	30	154	18		4		
Freeport Div., I. C.	5	5	2		22	4	8				
Galena Div., C. & N. W.	27	27	2	3	48	30	74		7		
Wis. Div., C. & N. W.	4				1						
Wabash.	46	255	13	161	33	239	34		1		
C. & E. I.	15	588	10	190	11	407	29				
C. M. & St. P.	17	11			36	23	11		2		
Wisconsin Central.											
Chicago & Great West.	16	25	3	1	227	270	17		2		
A. T. & S. Fe.	25	149	11	33	34	142	35				
E. J. & E.	12	40	5	10	41	112	7				
Through and special.	4	43		2	30	52	3		12		
Total each grade.	638	2345	92	627	875	2126	820		66		
Total corn.									7,859		

OATS AND RYE.

Railroad.	OATS.					RYE.				
	White.			Wt. C.*		No Grade.			No Grade.	
	1	2	3	2	3	1	2	3	1	2
C. B. & Q.	9	419	48	852		3	78	60		
C. R. I. & P.	3	160	6	741		16	16	35		
Chicago & Alton.	1	5	4	310		8	3	5		
Illinois Central.	4	32	17	770		16	5	1		
Freeport Div., I. C.	55	215	30	105		16	8			
Galena Div., C. & N. W.	36	915	53	214		6	17	13		
Wis. Div., C. & N. W.	227	246	6	12	3	23	3			
Wabash.		2	1	291		39	9	5	1	
C. & E. I.		3	6	391		5	2	4		
C. M. & St. P.	79	962	89	298	1	5	72	4		
Wisconsin Central.										
Chicago & Great West.		181								
A. T. & S. Fe.		17	27	169						
E. J. & E.		15		81						
Through and special.		1	15	8	61		1	9		
Total each grade.	416	3201	303	4344	4	98	329	156	1	
Total oats and rye.						8,366				186

* White Clipped.

BARLEY.

Railroad.	Barley.					No Grade.	Total No. Cars all Grn by Roads
	Bay/Brewing	Chevalier	2	3	4		
C. B. & Q.			126	68	8		2,919
C. R. I. & P.			180	98	22		1,929
Chicago & Alton.							1,519
Illinois Central.							1,749
Freeport Div., I. C.			115	135			745
Galena Div., C. & N. W.			342	43	6		2,209
Wis. Div., C. & N. W.			307	43	4		932
Wabash.							1,136
C. & E. I.							1,883
C. M. & St. P.			690	174	19		2,654
Wisconsin Central.							
Chicago & Great West.			35	32	4		908
A. T. & S. Fe.				1	9		705
E. J. & E.			6	6	7		375
Through and special.							327
Total each grade.			16	1,805	690	62	13
Total barley.							20,092
Total grain, cars.							2,505

PERSONAL

Robert Kennedy, manager of the Northern Pacific Elevator Co., is now in charge of the company's office at Portland, Ore.

Robert Ritchie has succeeded W. J. Fitch, who formerly represented the Northern Grain Co. of Ashland, Wis., in Wisconsin.

R. H. Allerton has been appointed grain inspector for the Argentine Board of Trade, to fill the vacancy caused by the resignation of Albert Peterson.

W. B. Henry of Pullman, Wash., has succeeded S. C. Armstrong as manager of the Northern Pacific Elevator Co.'s grain warehouse at Guy, Wash.

J. G. Martin, manager of the Great Northern Grain Co. of Ashland, Wis., has removed to Chicago, Ill., to which city the company's headquarters will be removed.

Douglas Webster, of the grain firm of McCaul, Webster & Co., has removed from Aberdeen to Minneapolis, Minn., where the company has established its headquarters.

C. W. Cooper, formerly of the Hudnut Co. of Terre Haute, Ind., has been appointed superintendent of the 100,000-bushel elevator which West & Hutton recently completed at Lynton.

C. E. Robinson and Miss Nellie M. Garver, both of Farmer City, Ill., were married December 30. Mr. Garver is with the firm of E. S. McClure & Co., grain dealers of Farmer City.

J. T. Arthur, of the firm of John T. Fahey & Co., grain exporters of Baltimore, Md., has removed to St. Louis, Mo., and accepted a position with the E. B. White Grain Co. of that place.

George Woolway, foreman of the Northern Grain Co.'s flour mill at Ashland, Wis., has been appointed superintendent of the company's new elevator which is being erected at Manitowoc.

Thomas Watson, grain broker of San Francisco, Cal., was recently married to Miss Emma Spreckles, daughter of Claus Spreckles. Mr. Watson had been a friend of the family for years.

Geo. F. Bell, of the grain firm of Bell Bros., Lostant, Ill., has been recommended by his friends to Gov. Tanner for a position on the Illinois Board of Railroad and Warehouse Commissioners.

W. J. Fitch, general salesman for the Great Northern Grain Co. in Wisconsin, will hereafter represent the company in New York City, where he will have charge of the firm's Eastern business.

J. W. Hays, vice-president of the Standard Grain Co., Superior, Wis., has retired from the grain business. E. B. Manwary and Benjamin Cook will continue the business of the Standard Grain Co.

John Chisholm, who has had charge of the office of the Monarch Elevator Co. at Minneapolis, for several years, has taken the position of traveling auditor for F. H. Peavey & Co. on the Pacific Coast.

S. C. Armstrong, manager of the Northern Pacific Elevator Co.'s grain warehouse at Guy, Wash., has succeeded Robert Kennedy as general manager of the company, and has established headquarters at Colfax, Wash.

Angus Smith, the well-known grain man of Milwaukee, Wis., attained the age of 74 years December 16. He celebrated the occasion by buying 150,000 bushels of wheat, having sold 600,000 bushels the day before as a sort of prelude, both of which events are characteristic of Mr. Smith's long and active career.

W. H. Chambers, the hustling grain buyer of Hepburn, has transferred his grain business and elevator to his father, who has leased it to A. M. Allen of Des Moines. Mr. Chambers has been operating the elevator at Hepburn for seven years, and has by his fair dealings made a host of friends who will regret very much to have him leave. He will move to Des Moines, and will be engaged in attending to the business of the Grain Dealers' National Association, of which he is the secretary.—Herald, Clarinda, Iowa.

GRAIN BUYERS OVERBIDDING FOR CORN.

There is trouble in the ranks of the local grain buyers. They have gotten up a miniature war in the buying of corn, and while they battle the farmers round about are smiling, for the clash is bringing them two cents more on the bushel than they have been receiving.

It is all the result of a little misunderstanding between Campbell, Thomas & Co., who buy at Boyleston, and John C. Young, who buys at Michigantown. It appears that Campbell, Thomas & Co. took a portable corn sheller up to Boyleston to shell some corn they had on hand there. After finishing this they took the sheller around over the country among the farmers, offering to shell their corn free of charge, providing they would sell it to them (Camp-

bell, Thomas & Co.) at Boyleston. This is what caused the trouble, for Mr. Young claimed that it was taking an unfair advantage of him. They failed to reach an understanding, and as a result Mr. Young began paying 18 cents per bushel for all corn brought to him at Michigantown. The regular market price is 16 cents, so, of course, this offer turned the tide in his direction. Campbell, Thomas & Co. promptly began paying the same price in order to keep up with the competition. The war has extended to Frankfort, and farmers are now getting 18 cents per bushel for corn here. This, the grain men claim, is all they get for it themselves. This war only applies to corn, and the probabilities are that the gentlemen will soon grow tired of working for their health, and get down to business again.—Times, Frankfort, Ind.

OBITUARY

F. B. McKenzie, grain merchant of Brandon, Man., died recently.

J. J. Stacks, grain dealer of Hartford, Wis., died December 21, after an illness of several months.

J. F. Seldomridge, of the firm of Seldomridge & Pebbles, dealers in grain, etc., at Colorado Springs, Colo., died recently.

William Meek, a well-known grain dealer of Fall River, R. I., died December 31 of Bright's disease. A son and daughter survive him.

Elijah D. Tilden, who was formerly engaged in the grain business at Hingham, Mass., died at his home at North Weymouth, December 30, aged 67.

William Leshar, of the firm of Kalbach & Leshar, grain and coal dealers of Richland, Pa., died suddenly January 3 of heart disease. Mr. Leshar was 60 years old.

Alfred M. Snyder, who some years ago was engaged with David Kellogg in the grain, feed and flour business at Seattle, Wash., died December 23 at Port Blakeley, at the age of 70.

George D. Klinefelter of Hanover, Pa., who was formerly engaged in the grain and feed business and also in the milling business, died January 5, aged 81 years. Of recent years Mr. Klinefelter has been interested in banking and railroad business.

George A. Abel, chief grain inspector of the San Francisco Produce Exchange, is dead, having been asphyxiated by gas on January 14. He was found lying on the floor, and it is supposed he got out of bed to turn off the escaping gas, but was too weak. Mr. Abel was noted as a grain expert all over the world, and foreign buyers always required his certificate on grain cargoes purchased by them.

Enoch Hancock & Son, the senior member of the firm of E. Hancock & Co., grain commission merchants of Nashville, Tenn., died January 3, at the age of 54 years. Mr. Hancock was born in Giles County, Dec. 19, 1854. He was one of the originators and charter members of the Nashville Warehouse & Elevator Company, and also of the Merchants' Warehouse. At the time of his death he was conducting a grain commission business with his son, Earl Hancock.

James A. Smith, a prominent merchant and grain dealer of Hartford, Conn., died January 3, after suffering for six years with a nervous affection. Mr. Smith was born in Glastonbury, Conn., in 1838. In 1855 he graduated from the high school of Hartford and entered the office of William Hawes, a grain dealer, whose partner he became in 1860. In 1882 the firm of Smith, Northam & Co. was organized to carry on a wholesale grain, feed and flour business by Mr. Smith, Chas. H. Northam and E. V. Mitchell. Mr. Smith was prominent in business and social circles, and leaves many friends who will regret his loss.

FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the 17 months ending with December, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1896-97.	1895-96.	1896-97.	1895-96.
August.	1,770,160	1,257,850	1,060,659	538,890
September.	1,827,480	1,799,050	1,389,514	1,159,128
October.	2,014,920	1,957,450	515,159	1,026,467
November.	874,640	1,202,300	259,918	402,422
December.	643,272	817,650	5,692,057	152,984
January.		493,900		211,513
February.		350,700		189,892
March.		884,150		303,301
April.		247,500		259,137
May.		273,350		447,311
June.		237,600		257,531
July.		409,750		546,239
Total bushels.	6,930,472	9,458,850	8,927,284	5,857,785

ELEVATOR

GRAIN NEWS

An elevator is being erected at Hanna, Wis.
J. P. Finn is buying grain at Dansville, N. Y.
An elevator may be built at Farmington, Minn.
A cotton seed oil mill is to be erected at Macon, Miss.

J. A. Tebbetts will open a grain store at Berwick, Maine.

A. A. Luby is operating the new elevator at Kirksville, Ill.

Alexander Pate's elevator at Wellington, Ill., is completed.

Valentine Mathes has opened a grain store at Dover, N. H.

Harry Jackson has opened a grain store at Centerville, N. H.

Harry Jefferson has embarked in the grain business at Lilly, Ill.

J. M. Little has engaged in the grain business at Springfield, Ohio.

E. F. Lord has engaged in the grain business at West Ossipee, N. H.

Chris Alderson of Hampton, Iowa, will erect an elevator at Sheffield.

G. R. Riddle has succeeded Fred Rose, grain dealer at Chase, Ind.

C. L. Hill of California, Mo., has opened a grain store at Victoria, Texas.

R. & J. Ervin have leased the elevator at Hayes, Ill., and are buying grain.

The Cargill Elevator Co. is to erect a 10,000 bushel elevator at Arcadia, Minn.

C. R. Kelsey & Co. have purchased O. K. Rickard's elevator at Hershey, Wyo.

Solomon Schurman has opened a grain and seed store at Portsmouth, N. H.

Ely & Bissell's new elevator at Antwerp, Ohio, is completed and in operation.

F. H. Hoerman's new elevator at Linn, Kan., has a capacity of 10,000 bushels.

Blythe & Shenabarker have engaged in buying grain at Blue Springs, Neb.

Wm. M. Wood has purchased Dingley Bros' grain business at Gardiner, Maine.

Caldwell Bros. expect to erect an elevator and warehouse at Stanton, Mich.

The firm of Wagar & Moore, grain brokers of New York City, has been dissolved.

Holmes & Claggett's elevator at Cooksville, Ill., is being repaired and enlarged.

The Taylor Bros' Co. will erect a new elevator at Quincy, Ill., at a cost of \$15,000.

The farmers' elevator at Hamilton, N. D., has been enlarged and a feed mill added.

Thomas Moore has bought N. P. Dazey & Co.'s grain business at Dallas, Texas.

McCaull, Webster & Co.'s new elevator at Vermilion, S. D., is about completed.

The M. O. Nelson Milling Co. of Lisbon, S. D., contemplates building an elevator.

Ira Tinkham & Co., dealers in grain and groceries at Middleboro, Mass., have assigned.

Dunn & Backer, dealers in fertilizers at Troy, Ind., are erecting an elevator at that place.

J. L. Farrish has purchased R. L. W. Probasco's grain and coal business at Huron, Kan.

Plans have been prepared to double the capacity of the Three-I elevator at Streator, Ill.

The Hope Mill & Elevator Co. has succeeded Tischauser & May, millers at Hope, Kan.

Carpenter & Jordon have succeeded Carpenter & Moulton, grain dealers of Shindlar, S. D.

Jefferson Morrison and P. Mutch have purchased Rhode Bros' elevator at Morrison, Iowa.

The Mutual Cotton Oil Co. will enlarge its plant at Columbus, Ga., at the end of the season.

The Douglas Grain Co. of Superior, Wis., assigned January 1. Its capital stock was \$15,000.

E. F. Scituate has purchased the coal and wood yard of R. R. Whipple at Phoenix, R. I., and in

connection with that business will deal in grain and hay and operate a feed mill.

S. W. Bowne has succeeded D. D. Mangam & Co., dealers in grain and feed of New York City.

The last of the grain warehouses in Northwood, N. D., has been transformed into an elevator.

Geo. E. Talbot has opened an office at Worcester, Mass., where he will deal in grain, stocks, etc.

N. W. Whipple, grain dealer at Pawtucket, R. I., will soon occupy a new building at that place.

Henry Cristlieb, grain dealer at Mansfield, Ill., has completed and is operating his new elevator.

Wm. E. Baitzell has withdrawn from the grain and flour firm of A. W. Reed & Co., Baltimore, Md.

Powers & Jones, dealers in grain, groceries, etc., at Lynnvill, Ind., have sold out their general store.

E. Walker & Son have erected an elevator at Assumption, Ill., where they will carry on business.

The St. Anthony & Dakota Elevator Co.'s elevator at St. Hilaire, Minn., has been closed for the season.

The Lawrenceburg Roller Mill Co. will build an elevator of 10,000 bushels' capacity at Lawrenceburg, Ky.

John M. Rutherford has established a store at Royalton, Pa., where he is dealing in grain, feed and flour.

C. W. Sheldon & Co. have succeeded C. W. Sheldon, dealer in grain implements, etc., at Percival, Iowa.

Moore Bros. have engaged in the grain business at Humboldt, Ill., where they have erected an elevator.

Samuel Murray has purchased ground at Bad Axe, Mich., where he will erect a grain elevator in the spring.

Lee Davis of Jefferson, Iowa, has purchased a grain office at Scranton, where he has engaged in business.

A. L. Boggs Jr., dealer in grain and feed at Baltimore, Md., assigned recently for the benefit of creditors.

T. G. Williams has been admitted to partnership in the grain commission firm of S. Zorn & Co., Louisville, Ky.

A. Stubbs has engaged in grain buying at Delavan, Ill. He has an office and scales and is loading into cars.

The St. Anthony & Dakota Elevator Co. has closed its elevator at Hallock, Minn., on account of the short crop.

Farmers of Brown County, Wisconsin, are trying to organize a company to build a grain elevator at Green Bay.

The McFarlin Grain Co.'s elevator at Madrid, Iowa, is being overhauled and new machinery is being put in.

The National Starch Co. has started a new plant for the extracting of corn oil at Glen Cove, Long Island, N. Y.

Hayes Bros. have completed a new elevator at Galesville, Ill., where they have engaged in the grain business.

M. A. Ferguson has about completed a new elevator at Odell, Ill., where he will engage in the grain business.

The Peavey Elevator at Fertile, Minn., has been closed until the next harvest on account of the light crop this season.

William Bartey has purchased Smith & Trainor's elevator at Winthrop, Iowa, and will take possession next spring.

Samuel Colburn's grain store at Providence, R. I., was entered by burglars recently and a quantity of grain was stolen.

Charleston, S. C., is now equipped as a Southern export port, two well equipped elevators having been erected there.

J. O. Johnson, dealer in grain and farm implements at Wolcott, Ind., has completed and is operating a new elevator.

Dimock & Waite, grain dealers of Easthampton, Mass., are now conducting their grain and hay business in new quarters.

W. S. Bouton has erected cribs at Tecumseh, Neb., and commenced buying corn for the Chicago Provision Co. of Chicago, Ill.

The firm of E. S. Murray & Co. has been incorporated at Des Moines, Iowa, with a capital stock of \$150,000, to conduct a general brokerage and com-

mission business in grain, stocks, etc. The incorporators are Geo. B. Powers, Robt. H. Kane and John O'Connor.

It is reported that Geo. H. Van Wagener and Harry Mitchell of London, Ohio, will erect corn elevators at Florence, Ala.

P. B. & C. C. Miles, grain commission merchants of Peoria, Ill., have bought I. M. Hutches' elevator at Marble Rock, Minn.

Harvey D. Friend, dealer in grain, provisions and groceries at Bucksport, Maine, assigned recently with liabilities of \$1,500.

The elevators of Oscar Spatz and A. J. Barry at Litchfield, Minn., were closed recently upon the assignment of the operators.

G. W. Wagoner is about to build an elevator and mill at Stony Ridge, Ohio, where he has been engaged in the grain business.

Farmers of Calumet County, Wisconsin, are organizing a company for the purpose of erecting a grain elevator at Sherwood.

Esson & Cunningham, grain dealers of Brook, Ind., celebrated the coming of 1897 by beginning to run their elevator day and night.

A meeting will be held at Faribault, Minn., January 16, to consider the advisability of organizing a cooperative elevator company.

The German Grain Co. has been organized at Eustis, Neb., to carry on a grain business. The company is composed of farmers.

The Norfolk & Western R. R. Co. says there is no truth in the report that it intends to build an elevator at Lambert Point, Va.

Herman Waterman, one of the oldest grain dealers in San Francisco, failed recently with liabilities of \$33,000, and assets of \$16,000.

Kaufman Bros., grain dealers of Claytonville, Ill., who are erecting a warehouse at Goodwine, may erect an elevator at Claytonville.

Timothy Millard and others of Cook, Neb., are organizing a farmers' elevator company, and may build an elevator in the near future.

Chas. Kaestner & Co. will supply four Kaestner Improved Oat Clippers for Harry G. Chase's Nickel Plate Transfer Elevator at Chicago.

The North Elevator at Foosland, Ill., has been sold to parties of Champaign, Ill., who will take possession the latter part of January.

The McMorran Milling Co., miller and dealer in grain, seeds, etc., at Port Huron, Mich., writes us that it is fitting up a corn meal plant.

Henry L. Fitch, who had been connected with the Narragansett Milling Co. for some years, has leased the elevator and mill at Darlington, R. I.

P. U. Loysen of Shiocton, Wis., writes us that he is building an elevator and mill at that place, which he will equip with new machinery.

E. M. Shurtleff, grain and feed dealer of Marengo, Ill., recently purchased a feed mill of The Edw. P. Allis Co., which he will add to his plant.

A. E. McKenzie has succeeded to the grain business at Brandon, Man., formerly carried on by his father, F. B. McKenzie, who died recently.

It is said that the Canadian Pacific R. R. Co. propose to build an elevator at Owen Sound, Ont., which will have a capacity of 1,000,000 bushels.

Applegate & Corbin have engaged in the grain business at Blackstone, Ill., occupying the new elevator which was recently completed at that place.

The Guendalos Rice Co. has been incorporated at Georgetown, S. C., to cultivate and sell rice in all parts of Georgetown County. The capital stock is \$5,000.

The Atchison, Topeka & Santa Fé R. R. Co. will, it is reported, erect a large elevator at Winfield, Kan., to take the place of the one that burned last spring.

The firm of Shafer & Withrow has been organized at Geneseo, Ill., to succeed Sand & Shafer, Henry Sand retiring. The new firm will operate the Taylor elevator.

H. H. Dickson, dealer in grain, hay and fertilizers, and S. E. Ives, grocer of Orlando, Fla., have entered into a partnership and will consolidate their businesses.

A. V. Morrison has leased A. W. Treat's elevator at Gays, Ill., and will continue the grain business. Mr. Treat is still interested in the elevator, but will establish a hay office and carry on business in that line.

Farmers in the vicinity of Olivia, Minn., are contemplating building an elevator at the place known as Gravel Pit, between Olivia and Renville, and have it completed ready for next year's business. The stock has already been promised and a petition submitted to the railroad company for ground on which

to locate the building. If the petition is granted the elevator will be built next season.

S. D. Ewing, who has bought grain for the Middle Division Elevator Company at Graymont, Ill., for several years, has been succeeded by Mr. Slyder of Pontiac.

It is said that the Ogilvie Milling Co. is contemplating erecting a 500,000-bushel elevator at Montreal, and a 150,000-bushel elevator at Winnipeg, next spring.

Ingwersen & Peters is the name of a new firm which has engaged in the grain business at Clinton, Iowa. They are erecting corn cribs and buying considerable corn.

Phelps & Co., grain brokers of Salt Lake City, Utah, failed recently, with liabilities of \$10,000, which is said to be due to the failure of Boone & Co. of Chicago.

On December 24 the Union Grain and Hay Co. of Cincinnati, Ohio, sold to starch houses and distillers 100 cars of No. 2 Corn at 21½ cents, 22 cents and 22½ cents.

The grain buyers of Waverly, Neb., had crib room for 60,000 bushels of corn, and had to build cribs for 30,000 bushels more in order to hold the crop that was coming in.

Dodgson & Jones have purchased the grain and coal business of the Crescent Grain & Lumber Co. at McLean, Ill., and Mr. Dodgson will have charge of the business.

It is said that at Sibley, Ill., are corn cribs enough to form a line two miles in length if they were placed end to end. In these cribs are stored 300,000 bushels of corn.

The Great Western Grain Co. has filed notice of a change of name to the Illinois Phonograph Co., and instead of dealing in cattle and grain will deal in phonographs.

McMichael Bros. have closed their elevator at White Lake, S. D., and it is said they have closed their houses at other points on the branch of the C. M. & St. P. R. R.

The Farmers' Elevator Company of Pine Island, Minn., has built an office and made other improvements at its elevator. The company is said to be in a prosperous condition.

Joseph Stout of Wenona, Ill., has bought Gants Bros' elevator at Garfield, and after overhauling it and putting in new dumps, etc., will engage in the grain business at that place.

Grain men of Baltimore, Md., talk of asking the railroads to increase their elevator facilities at that port, alleging that the present facilities are no longer adequate to the export traffic.

R. P. Wood and N. K. Sailor have formed a partnership at Normal, Ill., to carry on Mr. Wood's grain business, Mr. Sailor having purchased a half interest in Mr. Wood's elevator.

A new company under the firm name of John A. Thompson & Co. has been organized and incorporated at Edinburg, Ind., with a capital stock of \$5,000, to buy and deal in grain.

The H. W. Beck & Sons Feed & Seed Co. has been incorporated at St. Louis, Mo., with a capital stock of \$20,000. The incorporators are J. W. Beck, H. W. Beck, C. J. Beck and others.

F. M. Scrafford of Seneca, Kan., has bought a half interest in the elevator operated by Dennis & Clelland at Goff, Kan., and will engage with them in the grain and live stock business.

The Kirkpatrick Grain Co. has purchased the Nicewander Elevator at Plainfield, Ill., and a new office has been erected. J. B. Kirkpatrick will have charge of the business at that point.

Schenck & Johnston, proprietors of the Rock Island Elevator at Pawnee, Neb., have erected 280 feet of new cribs for corn near their elevator, and contemplate building 200 more feet.

R. Vanderveen has purchased and is now conducting the business of the Coöperative Grain Co., dealing in grain and coal at Wessington Springs, S. D., and the coöperative company is no more.

The following officers were recently elected by the Northwestern Elevator & Milling Company of Toledo, Ohio: President, T. A. Taylor; vice-president and treasurer, F. H. Tanner; secretary, R. Fuller.

The Chicago Title and Trust Co. has been appointed receiver for Norton & Co. of Lockport, Ill., who operate elevators and mills. The receiver will continue the firm's business, and the creditors will be paid in full.

Nelson Story and Elias Story Jr., doing business under the firm name of Nelson Story & Co., engaged in the grain and elevator business at Belgrade, Mont., in the grain, feed and flour business at Butte City, and in the flour milling business at Bozeman, have dissolved partnership. Elias Story Jr. has re-

tired and his interest acquired by Nelson Story Jr., and the business will be continued under the same firm name as heretofore.

The firm of McCord Bros., which was recently incorporated at Superior, Iowa, with a capital stock of \$10,000, to deal in grain and farm produce, is building an elevator at Estherville, Iowa.

It is reported that the grain merchants of Weldon, Ill., among whom are Carl Swigart and J. H. Robertson, are erecting corn cribs all over town to store the large amount of corn they are buying.

A company in which J. J. McNally is interested has bought the Southern Stave & Lumber Co.'s plant at Little Rock, Ark., and will remodel it and establish a cotton seed oil and delinting mill.

Coryell & Dean, dealers in grain, hay, etc., at Prattburg, N. Y., contemplate erecting an elevator which will have an elevating capacity of 500 bushels per hour, and storage capacity of 8,000 bushels.

The C. S. Lee Commission Co. has opened offices at Kansas City, Mo., and engaged in a grain, provision and stock commission business. C. S. Lee, the head of the firm, is one of the oldest commission men in Kansas City.

S. M. Bird, of the Purcell Grain Co., and Frank L. Miller, formerly with G. A. Adams & Co., have formed a partnership at Kansas City, Mo., and have engaged in the grain business under the firm name of Bird & Miller.

The R. G. and C. H. Risser Co., in the grain business at Kankakee, Ill., is about to erect an elevator at Templeton, Ill., where it will carry on a grain business. The new elevator will have a capacity of 200,000 bushels.

Davidson & Smith, one of the oldest grain commission firms of Kansas City, Mo., has been dissolved. Mr. E. W. Smith retires, while Mr. Davidson will continue the business under the firm name of J. K. Davidson & Co.

The Isaacs-Sherry Grain Co. has been incorporated at St. Louis, Mo., with a capital stock of \$20,000, by Charles W. Isaacs, J. E. Sherry and W. C. Douglass. Chas. A. Isaacs is president, and Joseph E. Sherry, vice-president.

The firm of Cornwall, Beebe & Co. has been incorporated at New York City with a capital stock of \$10,000 to deal in grain, cotton, stocks, etc. The directors are Jos. C. Beebe, W. C. Payne, Edwin C. Beebe and W. C. Butler.

The Imperial Elevator Co. has removed its principal offices from Fargo, N. D., to Owatonna, Minn. The company operates elevators on the Great Northern Railway. P. L. Howe is president, and A. M. Sheldon secretary and treasurer.

The Munday-Carew Co. has been incorporated at Litchfield, Ill., with a capital stock of \$10,000 to buy and sell grain and do a general commission business. The incorporators are Chas. B. Munday, Robert Carew and John T. David.

The Northern Grain Co.'s new elevator at Manitowish, Wis., will be ready to receive grain by February 1. It will cost in the neighborhood of \$50,000, and its storage capacity will be 500,000 bushels, loading capacity 30,000 bushels per hour.

H. Mooers & Co., grain and produce commission merchants of Kingston, Ont., Canada, write us that they purpose getting up a company to build a 500,000-bushel elevator at that place. It will be a public elevator under government inspection.

Chauncey E. Wheeler, grain dealer of Fargo, N. D., has formed a partnership with Frank L. Hale, formerly of Helena, and the new firm will continue the business. The formation of the company was necessitated by increasing business.

A. W. Robertson, grain dealer of Phillipsburg, Kan., received by telegraph one Monday an order for 8 cars of white corn for the Mexican market, provided it could be on track Tuesday. Mr. Robertson had the corn, and he shelled it in time to fill the order.

A. L. Hurtubise & Co., grain, hay and lumber merchants of Montreal, Quebec, failed recently with liabilities of about \$160,000, which is said largely to exceed the assets. The failure is said to be due to losses in the lumber interests and not in hay and grain.

Schwamer & Best of Palmer, Ill., inform us that the firm of H. A. and O. M. Best, grain dealers, has recently changed hands, the old firm retiring from business. The business will hereafter be managed by Harry F. Schwamer and Fay R. Best under the name of Schwamer & Best.

The Electric Grain Elevator Company has been incorporated to conduct a general elevator business for the storage of grain, and to buy, sell and deal in grain in Buffalo. The capital is \$350,000, and the directors are Edward W. Eames of Buffalo, Yale Kneeland, Franklin E. Kneeland, Ormsby M. Mitchell and Ruleman Miller of New York City. It is said

the company will erect a large elevator which will be equipped with all modern adjuncts, and the motive power will be electricity, which will be generated at Niagara Falls.

The American Spirits Mfg. Co. of Peoria, Ill., started an experimental corn oil mill the first of the year. This mill has a capacity of 6,000 bushels per day, and if the new process in which it is employed proves successful it is said the company will similarly equip all its plants.

The firm of Sanborn, Favor & Co., commission grain, hay, flour and produce, Boston, Mass., has been dissolved by mutual consent. J. Walter Sanborn is continuing the business of the late firm at the same location, 504 Chamber of Commerce, under the style of J. Walter Sanborn & Co.

W. H. Chambers, who was formerly in the grain business at Hepburn, Iowa., writes us that he has sold his elevator to his father, John W. Chambers, who in turn leased it to A. M. Allen. Mr. Allen will continue the business at Hepburn, while Mr. W. H. Chambers has removed to Des Moines.

West & Hutton of Terre Haute, Ind., have completed a new elevator at Vincennes, which has a transfer capacity of 100,000 bushels per day, and a storage capacity of 30,000 bushels. C. W. Cooper, who has been in the employ of the Hudnut Co. for some time, is the superintendent of the new elevator.

Paine Bros. of Milwaukee, Wis., have leased and are operating the Big Four Elevator at Benton Harbor, Mich. R. H. Bunker is manager of the house. The elevator had been idle for a year or more. Paine Bros. will ship grain East across the lake all winter, and will make this a permanent route for all seasons.

The Greenleaf-Baker Grain Co. has been incorporated at Atchison, Kan., with a capital stock of \$200,000, to erect an elevator and do a general grain business. The directors are: F. M. Baker, F. G. Crowell and Robert Reid of Atchison; E. S. Greenleaf of Jacksonville, Ill., and E. L. Greenleaf of Kingman, Kan.

When they get through buying for the season, J. D. Robbins & Co., grain dealers of Hastings, Iowa, will have about 150,000 bushels of corn cribbed, said to be the largest single holding in that line in the state. They bought 70,000 bushels of it last year. They also have on hand 25,000 bushels of oats of last year's crop.

The Northern Grain Co. of Ashland, Wis., decided on an important change the beginning of the new year, and has removed its headquarters to Chicago, Ill. This move was rendered necessary by the growth of the company's business. The head offices will be in the charge of J. G. Martin one of the principal members of the company.

The Rockford Sugar Refining Co., Ltd., of Rockford, Ill., writes us that it has fully completed its 260,000-bushel corn elevator at its works at Rockford, and that it will be employed to take care of corn for the company's use. The elevator was constructed by J. S. Metcalf & Co. of Chicago, and is a first-class house in every particular.

The firm of Higgins & Howson has done so much in the line of purchasing and shipping grain this season that the C. M. & St. P. Ry. Co., appreciating the firm's efforts in building up a big grain trade, has put in at the company's elevator an elevated dump which will greatly reduce the labor in storing and loading grain in the future.—Advertiser, Clinton, Iowa.

Ross & Ross, dealers in grain, coal, lumber, etc., at Chalmers, Ind., write us that we erred in stating that John and Robert Ross bought an elevator at Chalmers, which would be managed by Scott Ross. The firm of Ross & Ross, successors to James Ross & Co., is composed of James Ross and Robert Ross. R. W. Barr still manages the business, as he did for James Ross & Co.

The Pantagraph of Bloomington, Ill., says that a local grain firm shipped on October 8 and October 20 grain to Baltimore, amounting in all to twenty carloads, and that up to the middle of December none of the grain had arrived at its destination, and the railroad officials had not succeeded in getting track of the lost cars. The grain shipped on the first date had been on the road eight weeks.

Geo. N. Reinhart & Co., dealers in hay, grain and feed at New York, N. Y., recently remodeled and enlarged their plant located on the Harlem Railroad, between One Hundred and Sixty-second and One Hundred and Sixty-third Streets, and it now covers six city lots. The company has large storage capacity for hay, grain and feed, has excellent shipping facilities, and does an extensive business.

The Chicago Great Western R. R. Co.'s elevator at Kansas City, Kan., has been completed, and is now in operation. The elevator is 70x120 feet in size, with an annex 60x180 feet; the storage capacity of the elevator is 600,000 bushels, of the annex 400,000 bushels. There are 95 bins varying in capacity from 2,000 to 25,000 bushels. The elevator is well equipped for loading and unloading cars. Every pre-

caution against fire has been taken; there is a complete system of fire alarms, and the plant is provided with hose and a system of waterworks.

The Turner-Farrar Commission Co. has been incorporated at St. Joseph, Mo., with a capital stock of \$10,000 for the purpose of conducting a strictly commission business. The firm is composed of George L. Turner, president; R. M. Turner, secretary and treasurer, and other gentlemen of Quincy, Ill. These gentlemen have had considerable experience in the commission line, having been connected with the Buell & Baker Commission Company of Quincy for several years.

The Fairport Elevator & Dock Co. of Paynesville, Ohio, closed last month the most successful business season in its history. There was handled the past season 8,000,000 bushels of grain, and 155,000 tons of flour, and it is estimated that cargoes to the amount of 4,000,000 bushels were turned away to seek other ports, owing to the inability of the railroad company to furnish cars for transportation. An additional supply of cars is now being built in anticipation of next season's business.

Hon. Henry Harrison and George Doty, successors to Beldon & Co., grain and produce dealers at Rochester, N. Y., and who carried on the business under the same firm name, recently made a partial assignment of property for the benefit of creditors. It is not expected that a general assignment will be made. The company has a branch house at Geneseo under the charge of George Doty, at Brockport in charge of George La Due, and Senator Harrison is in charge of the headquarters at Rochester.

J. T. Benham, grain merchant of New Haven, Conn., celebrated the completion and opening of his new elevator at that place on December 30 by entertaining about 400 visitors. The plant was in operation from 2 to 5 p. m., and the guests were served with coffee, cakes and cigars after an inspection of the new elevator. The elevator contains 14 bins which have a capacity of 10 to 12 thousand bushels each. It has all the necessary machinery, including a steam shovel and a separator with a capacity of cleaning 1,500 bushels of grain per hour. A 20-horse power electric motor supplies power and light.

The Anchor Grain Company of Superior, Wis., a corporation organized with a capital stock of \$10,000, assigned recently, Charles F. Tryon being named as assignee. The cause of the assignment was inability to secure money necessary to carry on its grain business. The banks which had been advancing money upon consignments of grain refused to make further loans. The business was operated by Frank L. Davies, who was secretary, treasurer and manager. It is said that the company did the third largest business on the Superior Board. The nominal assets are \$2,500 with liabilities about the same.

The Advance Elevator of East St. Louis, Ill., which was formerly controlled by the United Elevator Co. of St. Louis, was recently sold to C. H. Albers, the receiver, for \$100,000. It is optional with the new Consolidated Elevator Co., the successor of the United Company, whether it will absorb the Advance, and it has not yet been determined whether this will be done. Following the sale the Advance Elevator and Warehouse Co. was reorganized, and incorporated with a capital of \$40,000, with C. H. Albers, president; W. P. Hazzard, vice-president, and W. H. Keirse, secretary and treasurer. The Venice Elevator at Venice, Ill., which also belonged to the United Elevator Co., was ordered sold by January 14. The other elevators formerly controlled by the United Co., the Union, Valley, Merchants, St. Louis, Central "A" and "B" and the Union Depot, will be sold later and bought in by the Consolidated Co.

Governor Bushnell has issued requisition papers that bring again into prominence the transaction of a man doing business in this city 15 or 20 years ago. The papers are to be served on the governor of Tennessee for the custody of Louis C. Zink alias Charles T. Whitman, and the charge against him is forgery. While in this city he built an elevator on the tracks of the C., H. V. & T. Ry., and did an extensive business in lumber and grain under the firm name of Zink & Son, they having the respect and confidence of the farmers for miles around. In November of 1879 young Zink went to Columbus and obtained from Doney & Dent, grain merchants of Columbus, \$3,000. Under an agreement he was to sell the firm 25 cars of corn to be paid for as soon as he had loaded it on the tracks of the C., H. V. & T. Ry. at Lockville, this county. Zink loaded 10 carloads of corn, secured a bill of lading for that number, and then, it is alleged, altered by forgery this bill of lading so as to make it state that the railroad company had received from him 25 instead of 10 carloads of corn consigned to Doney & Dent. Taking this money and a large additional amount which he had received through transactions from the farmers of this county and certain business firms of Columbus, he fled to Canada, where he lived for a number of years.—Eagle, Lancaster, Ohio.

The EXCHANGES

Memberships of the Minneapolis Chamber of Commerce are selling at \$210.

The election of officers of the Montreal Board of Trade will be held on January 26.

Memberships to the Chicago Board of Trade are selling at \$800, dues for 1897 paid.

The Kansas City Board of Trade is considering the question of removing, buying or erecting a building.

The grain men of the San Francisco Produce Exchange celebrated the ending of the old year by their usual flour and fireworks battle.

The directors of the Minneapolis Chamber of Commerce are contemplating removing to larger quarters. No definite action has been taken.

The members of the Boston Chamber of Commerce held a charity concert the last day of the old year, and collected a sum of \$409.63 for distribution to the poor.

Grain receivers of the Chicago Board of Trade are complaining of their representation on the new directory, there being only one or two representatives of the receiving interests.

There is a movement at the Cincinnati Chamber of Commerce to repeal the death benefit feature, which is similar to the one recently repealed by the New York Produce Exchange.

The auction of sample tables of the Chicago Board of Trade, which took place December 30, was livelier than the preceding year. The total sum realized was \$5,624, against \$3,600 in 1895.

The East St. Louis Board of Trade, which has been in a quiescent state for several years, is to be revived. The Board was organized 25 years ago, and secured a charter from the state.

The Chicago Board of Trade directors have adopted resolutions protesting against the action of Congress in its efforts to recognize the alleged Cuban Republic, the stand being taken that the latter does not exist.

The St. Louis Merchants' Exchange has increased the annual dues \$5, making them \$25. The Exchange pays \$100 benefit on the death of members, and it was found necessary to increase the dues to meet the deficiency caused thereby.

The grain men of the Kansas City Board of Trade ended the old year with a husking bee, during which gay young farmers entertained their associates with variety performances. Only members were admitted to the show, and flour throwing was tabooed.

W. D. Charde, secretary of the Kansas City Board of Trade, gave the members of the Board a New Year's present consisting of large framed portraits of all ex-presidents. There are thirteen pictures, and they will hang on the walls of the Directors' room.

S. H. Stevens has been reappointed Flax Inspector and Registrar of the Chicago Board of Trade. Mr. Stevens is well known in his connection with grain inspection. He was the first grain inspector in Chicago, and is the oldest grain inspector in the United States.

Members of the Milwaukee Chamber of Commerce held a minstrel show on December 31 in celebration of the departure of 1896. There were 25 artists, composing the "Milwaukee Chamber of Commerce Minstrel Aggregation." The show was first-class and the Chamber crowded.

Seven members of the Chicago Board of Trade failed to pay their dues at the end of the year, and their certificates reverted to the Board. Last year fifteen certificates were canceled in this way. In the past ten years seventy-three memberships have been canceled. The membership is now 1,843.

We are indebted to T. C. Friedlander, Secretary of the San Francisco Produce Exchange, for the 29th annual report of that body, for the year ending June 30, 1896. It consists of the annual statistical report of the Exchange, and other matter relative to the trade and commerce of California and other Pacific Coast states.

The directors of the Chicago Board of Trade are considering a proposition to make the weighmaster's office a salaried one at \$3,000 per year. It has paid from \$3,000 to \$6,000 per year in fees, and receivers say that if the salary is made so small the weighing charges should be reduced, so that they would receive the benefit.

Thos. T. Atkinson, grain broker, has been suspended from the San Francisco Produce Exchange and the Call Board Association for violation of the rules in carrying on a bucket shop business in connection with Wheelock & Co. This is the first case of its kind which ever came before the Exchange. Mr. Atkinson denies the charge on which

he was suspended, and alleges in turn that Call Board members violate in all their transactions for customers the constitutional provision in regard to commissions.

The annual election on the St. Louis Merchants' Exchange was held January 6, the regular ticket being elected as follows: President, Henry F. Langenberg; First Vice-President, Chris Sharp; Second Vice-President, William P. Kennett; Directors, Corwin H. Spencer, B. J. McSorley, P. P. Williams, Daniel E. Smith, Frank E. Kauffman.

In recognition of his efficient services, George F. Stone has been reappointed Secretary of the Chicago Board of Trade for 1897. Mr. Stone has held the important office of Secretary of the Board since July 1, 1884, during which time the affairs of the Board coming under the jurisdiction of the Secretary were never administered with more fairness or promptness.

A commission company of the St. Louis Merchants' Exchange recently contracted for the purchase, by sample, of a carload of oats from the Chris Sharp Commission Co., but refused to take the grain and failed to file notice to that effect with the seller within the prescribed time—one day from date of sale. At a meeting of the directors of the Exchange it was ruled that the purchaser must take the grain or be suspended.

The election of officers of the Kansas City Board of Trade was held January 5. L. M. Miller was elected president, and the vote for vice-president was a tie between Edw. W. Shields and B. C. Christopher. The directors elected were: F. P. Chalfant, Alfred Blaker, J. Bookwalter, Alex McKenzie, G. L. Brinkman and M. H. McNeill. It is said that Secretary Charde will resign, and Charles Young is spoken of as his successor.

Members of the Chicago Board of Trade will pay \$70 for dues this year, which is an advance of \$5 on 1896, and \$30 less than 1895. It was taken into consideration that the times are close for many in the trade, and the advance was made as small as possible. It was made necessary by expenditures for repairs and improvements in the property. On plans already carried out and on some still in process of completion over \$65,000 has been expended.

The new directors of the Chicago Board of Trade held their first meeting January 11 and appointed committees, etc. Wm. N. Green was appointed sampler for shippers of round lots, and L. A. Morey, Wm. McDougall and R. P. Kettels were reappointed samplers. The matter of appointing a weighmaster and the question of salary were turned over to the consideration of the new Weighing Committee, and the directors will consider the matter further at their next meeting.

The report of the Directors of the Chicago Board of Trade shows that for the year ending Jan. 4, 1897, \$291,159 were received, and \$273,622 expended, leaving a balance of cash on hand of \$17,536. The bonded indebtedness is \$1,250,000, nothing being paid on this account during the year. Receipts for rental of offices were \$109,395, against \$106,648 in 1895, and \$109,841 in 1894. There was expended for improvements during the year \$19,550, for interest on bonds \$59,545. The total membership is now 1,840, and there were 150 transfers during the year.

The annual election of officers of the Chicago Board of Trade took place on January 4. The total vote cast was 1,130, compared with 1,356 votes last year. Wm. T. Baker was reelected president, Richard S. Lyon, second vice-president. The directors elected were as follows: L. W. Bodman, W. B. Bogert, Hugh McMillan, Lloyd J. Smith, John F. Barrett, L. B. Mitchell. The Committee of Appeals elected was: T. M. Hunter, M. M. Freeman, F. C. Remick, and A. Eddy. Committee of Arbitration: O. A. Thorpe, C. A. Davies, A. L. Somers, J. J. Lindman, and C. L. Dougherty. There was no marked issue up, and no candidate opposing President Baker, so the election passed off quietly.

The Grain Committee on 'Change yesterday, five being present, had their attention occupied for an hour listening to the arguments in a case in which Levy, the commission man, was asking for a settlement with the Klein Flour and Feed Company. It appears that the former sold the latter a car of ear corn, and the latter, contrary to the rules of the Chamber, sent it across the river and did not want to pay the price quoted to him, because the inspector in Covington had reported it not up to sample. Levy held that Klein had no business to use any other inspection except the Chamber of Commerce, and refused to accept Klein's offer. The committee decided that Levy's position was right, but recommended a settlement that was accepted by both parties. A little figuring proved afterward that if the settlement had been made without worrying the committee, there would have been an exact difference of 60 cents.—Cincinnati Enquirer, December 17.

The Grain Dealers' Association of Northeastern Kansas will meet at Atchison, Wednesday, January 20.

WATERWAYS

It is expected that a line of steamers will be established between New Orleans and Venezuelan ports by April 1; trade relations between that country and this will be established, and St. Louis products, chiefly flour, exported.

It is said that 13 out of 16 vessels now under construction at Chicago belong to the 6,000-ton class, not one of which type can get above Market Street in the Chicago River. This will make cheap rates from South Chicago elevators.

A report has been transmitted to the House of Representatives of the results of a survey of the Milwaukee harbor with the view to obtain a 21-foot channel therein. It is estimated that this will cost \$58,000, and it is hoped that an appropriation will be made to carry out the work.

Major C. B. Sears, who is in charge of Lake Superior rivers and harbors improvement, says that the only way to maintain deep water between Duluth and Buffalo is to dam the Niagara River, to raise the level of Lake Erie and have locks and dams between Lakes Huron and Erie.

According to a report of the traffic on the United States and Canada Sault Ste. Marie Canals freight carried to and from Lake Superior ports during 1896 amounted to 17,249,418 tons, against 16,806,781 tons in 1895. The grain carried aggregated 90,704,534 bushels, against 54,546,944 bushels in 1895; flour, 8,882,858 barrels, against 8,902,302 barrels in 1895.

The export grain traffic via Southern ports will be still further augmented when Port Arthur, Texas, which is to be the terminus of the new Kansas City, Pittsburg & Gulf Road, is established. Port Arthur has a fine harbor, extensive elevator facilities will be put in, and it is expected that it will become the leading export point on the Gulf of Mexico.

The United States and Canada Deep Waterway Commission held a meeting at Detroit, Mich., December 21. A report will be made to Congress, and the commission will recommend the continuation of the work of investigation as to the advisability of constructing a deep waterway connecting the lakes with the Atlantic Ocean. The report will not say whether such a waterway should or should not be constructed.

There is a fleet of eighteen steamers carrying freight between the east and west shores of Lake Michigan this winter, against ten last year. The shipments of grain from Milwaukee are expected to be heavier than usual, three elevators, the Flint & Pere Marquette at Ludington, Mich., Paine Bros' at Benton Harbor, and F. Kraus & Co.'s at Grand Haven—having a total handling capacity of nearly 150,000 bushels per day.

According to a report of the lake commerce passing through Buffalo, N. Y., in 1896, the total receipts of grain, exclusive of flour, aggregated 163,431,814 bushels, against 108,077,930 bushels in 1895. The shipments by canal were 35,709,258 bushels, as against 20,236,114 in 1895, and 5,788 boats cleared eastward, as compared with 4,546 the preceding season. The highest rate on wheat to New York was 4 cents, and the average 3.7.

Alexander McPhee, grain exporter of Montreal, Quebec, recently made a plea before the Canadian Tariff Commission to allow United States vessels to carry grain from one Canadian port to another. He said that conditions were such that Canadians would not supply the vessels; that United States carriers were larger than Canadian vessels, and that while Canadian vesselmen would oppose this concession the interests of the grain trade required it.

Wet grain cargoes as a result of winter vessel storage have started in early this winter. The vessel R. Hallaran at Ogdensburg sprung a leak, and her cargo of corn is wet, rotten and hot. She cannot be taken to an elevator, and the cargo can only be removed with tubs. The Queen of the West at Ogdensburg sprung a leak and damaged her cargo of corn. The steamer Topeka, the only loaded vessel at Oswego, is said to have about 1,500 bushels of wet wheat.

In discussing fall navigation the Marine Record of December 30 says: The time is about drawing to a close when underwriters can rule the season of navigation as they have done from the earliest history of the lakes. The staunch wooden-built steamers Aurora and the City of Genoa simply give the schedule time for insurance the grand laugh, for they are still running with cargoes on Lake Erie. Arbitrary dates for extinguishing the light at light-houses, etc., no longer exist. The City of Genoa arrived at Buffalo with 90,000 bushels of corn from Toledo December 28, and the Aurora arrived at Buffalo on the 24th, and left for Toledo to load grain. The Record argues that insurance companies ought not to set any date limitation in the insuring

of vessels, and says that if domestic companies won't take a risk after a certain date, then others will be found to step into the field and make money by accepting comparatively safe premiums.

The average lake freights on wheat between Chicago and Buffalo during the past seven seasons, and the lowest and highest on corn, were as follows: In 1890, wheat 1.9 cents, corn 1.2-2 cents; 1891, wheat 2.4, corn 1.1-3.8; 1892, wheat 2.2, corn 1.6-2.3; 1893, wheat 1.7, corn 1.1-1.9; 1894, wheat 1.3, corn 0.9-1.2; 1895, wheat 1.9, corn 1.0-2.5; 1896, wheat 1.6, corn 1.1-2.0. Rates on wheat from Duluth to Buffalo averaged 2.1 cents, ranging from 2 to 6 cents in 1895, 1 1/4-3 in 1894; 1 1/4-3 1/2 in 1893; 2 1/4-4 in 1892; 1 1/4-9 1/2 in 1891; 2-5 cents in 1890.

One of the shoalest spots of the lakes is the Chicago River over the Washington Street tunnel. The tunnels and several bridges over the Chicago River continue to raise the ire of vesselmen, and especially those interested in large grain carriers, who want the tunnels lowered and the bridges replaced by better ones. The Chicago River should be made to accommodate the largest craft, which can be accomplished at a comparatively small expense. The River Improvement Association proposes to petition the Secretary of War to lower the tunnels.

Superintendent Aldridge's report of the operations of the canal system of New York shows that boatmen have had a comparatively prosperous business during the past season. Superintendent Aldridge says that the average price received by the boatmen for transportation of wheat between Buffalo and New York has been about 3 3/4 cents per bushel. This is the highest average since 1890, except in the year of 1893. The total number of tons of freight carried upon the canals during the season of 1896 was 3,714,894, of which the Erie Canal carried 2,742,438, and the Champlain 802,510.

Elevator men are not likely to take any decided steps in business at present, in spite of the cutting in on them by the wild elevators and the prospect of an increase of the list next season. The fact is that the earnings all round have been too good, and the handling of the immense amount of grain this fall was done too easily to warrant any changes. A leading elevator owner agrees that there ought to be a better understanding in regard to the consignments, so that bunching could be avoided, and then there would be no difficulty. If vessels would refuse to agree to wait for a house when there were others idle there would be no trouble.—Buffalo correspondent of the Northwestern Miller.

"Why is Lake Erie so far behind Michigan in winter navigation?" asks the Marine Record. "Perhaps there is no trade; but we think there is. Winter communication might as easily be kept open between Cleveland and Buffalo as on Lake Michigan, and the only reason why it is not kept open is on account of the underwriters, and the particular conservatism of Cleveland owners, who are more than susceptible of risks." Surely if there was any business doing winter navigation of Lake Erie could be easily accomplished, with ever so much greater safety than on Lake Michigan. As for the underwriters, some of them, at least, are willing to accept risks on any probable venture where a paying premium is in sight. Toledo has continued to ship by lake late into the season, and doubtless other ports would if business required it.

Few people connected with lake shipping have any idea of the enormous competition that the lake route has been meeting with of late years in the export flour and grain trade from such Southern ports as New Orleans, Galveston and Newport News. Buffalo's elevator monopoly, with its high transfer charges, is one of the prime causes of this trade being diverted from the lakes, says the Marine Record. It would not take much to stir up a disturbance on this score at the meeting of the Lake Carriers' Association. The plan of having New York state take over and operate the grain elevators is undoubtedly objectionable in principle, and to the layman it is decidedly ridiculous that new laws should be made which are an open confession of the inability of the lawmakers to enforce laws which came into existence for the very purpose of preventing extortionate transfer charges. The bill which was introduced in the New York State Legislature lately was defeated, however.

Any further enlargement of the Welland and St. Lawrence Canals system beyond that which is now being proceeded with would involve an expenditure the interest on which would exceed all benefit that could be realized, says the Canadian Manufacturer in a recent editorial which shows it to be thoroughly posted on the interests and conditions of the canals. It goes on to say: "If it is considered necessary or advisable that Canada should make an effort to secure a part of the upper lake traffic that is now being conducted on vessels of too large dimensions and depth of water to use our Welland Canal, the cheapest and best route for that traffic can be provided by a canal, river and lake channel from the mouth of French River, on Lake Huron, via Lake Nipissing and Ottawa River to Montreal. Our advocacy of this route is based on the belief that

it affords the most direct, the quickest and cheapest means of transportation from the West to the ocean; and, in addition thereto, would prove of immense local advantage to every interest and industry on both sides of its more than 400 miles of navigable waters."

PRESS COMMENT

CUTTING RAIL RATES.

The latest dodge for cutting regular rates and thereby securing business is said to be for a general freight agent, or one of his subordinates, to lay a wager with some big shipper that a certain amount of freight which the latter may have to send will not be shipped over the lines represented in the transaction. Naturally the shipper takes the bet and ships his goods over that line. When he is paid it is a simple transaction between two individuals.—Chicago Times-Herald.

CORN AS A SUBSTITUTE FOR WHEAT.

In this market finely ground corn meal having the general appearance of wheat flour in high degree, is being sold in carload lots, for purposes of mixture or blending with wheat flour. With five to ten per cent. of this corn product the ordinary tests fail to discover its presence in flour, and the great disparity in cost offers a strong inducement to make such a blend, and to make it as flour. This is not an altogether new industry, although little has been said about it. Just how much this introduction of corn into the bread-making material of the country may affect calculations as to the requirements of wheat and the marketable supply of corn cannot easily be calculated.—Cincinnati Price Current.

THE JOINT TRAFFIC ASSOCIATION.

The Joint Traffic Railway Association, located in New York, clothed with a little authority and with as much dignity and majesty as an Ottawa Indian chief dispensing injustice according to their arbitrary and self-willed inspirations, has imperiously waved aside the boycott on the Toledo, St. Louis & Kansas City Railway. We regret this action, for the boycott was of great value to the road named. The star chamber and illegal orders of these pretentious dignitaries will be investigated by Senator Cullom's committee. Progress and evolution in interstate commerce is of the boomerang persuasion under the administration of committees of five, and of the "two for five" quality.—Toledo Market Report.

WHY NEW YORK'S EXPORT GRAIN TRADE IS MENACED

The reason that New York is menaced in the East by St. John, Montreal and Boston, and on the south by Galveston, New Orleans, Norfolk, Newport News, Baltimore and Philadelphia, is largely this simple thing—that direct connection is made between railroad and ship's side. This is not the case in New York. In none of the ports named is there a costly transfer; in none of them is there a charge for lighterage or excessive port dues. They have no port charges of \$12 to \$18 per car such as prevails in New York. Because of our great geographical disability, three-fourths of the products that reach this port are received in one city, stored in another city and shipped in still another city—received in Jersey City, stored in Brooklyn and shipped in New York.—New York Evening Post.

THE PUBLIC ELEVATOR DECISION.

In his decision Judge Tuley holds that it is illegal for grain warehousemen to buy and mix grain of their own with that held in store for their customers—the general public. Surely this is a reasonable and wise reading of the law. If sustained by the Illinois Supreme Court it will lessen the power of the great corporations that have played such a conspicuous part in recent years in injuring grain markets, both local and primary, on account of their peculiar influence with transportation lines and their supreme authority at points of grain accumulation. If the Tuley decision does not stand then we may expect to see the combined warehousemen bolder than ever in driving all buyers but their own from country stations, and the mixing of grain indiscriminately regardless of the rights and protests of customers.—Modern Miller.

The Grain Dealers' National Association will in no way interfere with the work of the local associations. The trade has urgent need for both.

Farmers in the vicinity of Winnebago City, Minn., are said to be burning corn for fuel, and while the question of ethics is raised the sterner one of economy takes precedence. According to one estimate it takes 115 bushels of corn to buy a ton of coal, and more heat can be got from a dollar's worth of corn than from a dollar's worth of coal.



Let unsound hay and unsound money take a back seat this year.

Major J. W. Eldridge has engaged in the hay business at Springfield, Mo.

The Johnson Transfer Co. of Bloomington, Ill., is shipping hay to New York state.

A. Turnquist has opened a feed store at Bayfield, Wis., where he deals in hay, feed, etc.

Chas. S. Healey, dealer in hay, etc., at San Francisco, Cal., recently sustained a loss by fire.

Gougrey & Marshall, dealers in hay and straw at Stillwater, N. Y., have dissolved partnership.

If a hay man lacks business method he will soon find himself without profit and business too.

Hay balers should remember that retail feed dealers in the cities prefer light bales to large, heavy ones.

There are two classes of men who complain of the poor markets: Those who grow and those who ship poor hay.

J. S. Hutchins, dealer in hay, general produce, etc., at Mason City, Iowa, failed recently. The total assets are \$25,000.

A. W. Treat has retired from the grain business at Gays, Ill., having leased his elevator to A. V. Morrison, and has engaged in the hay business.

It is said that a wagon load of hay, the gross weight of which was 10,900 pounds, was recently hauled into York, Pa. The hay was not baled, either.

David Walsh has been reappointed inspector of hay on the Chicago Board of Trade, the duties of which office he has successfully filled for several years.

It will pay to ship good timothy to market. Bright green hay always had a ready sale at top prices, and is always preferred to the brown hay which has been cut late.

It is reported that hay is being hauled to Des Moines, Iowa, from Altoona in wagons, instead of being shipped over the Rock Island as formerly, owing to the rise in hay rates.

Fire started in a pile of hay in the rear of Berry & Risdon's feed store, 373 E. Seventh St., St. Paul, Minn., January 5, but the fire was discovered and extinguished before much damage was done.

According to the Kansas City Haymaker there are rumors that a number of horse owners in Kansas City will be indicted on account of cruelty to animals in feeding much of the hay that has recently been received at that market.

At the annual election of officers of the Kansas City Hay Dealers' Association recently the following officers were elected: President, J. B. Spellman; vice-president, W. H. Lockwood; treasurer, T. W. Russell; secretary, J. A. Brubaker.

Quality is only relative, of course, but country shippers are inclined to mold their opinion of their hay in comparison with that of their own locality only. This only makes trouble. It will pay all shippers to grade hay impartially and fairly.

President Hopp of the National Hay Association has appointed the following Committee on Legislation: Willis Bullock, of the Hay Trade Journal, chairman; E. L. Rogers, of the firm of E. L. Rogers & Co., of Philadelphia, and A. E. Clutter, of Clutter & Long, of Lima, Ohio.

Representative D. F. Wilber of New York recently presented to the Congressional Committee on Ways and Means a resolution and petition from the National Hay Association, requesting a duty of \$4 per ton on hay. Representative Curtis of Kansas also said that Kansas farmers wanted an increase in the duty on hay, oats, flaxseed and all products of the farm.

The National Hay Association's Committee on Transportation and Car Service has been appointed. W. W. Granger, manager of the Union Grain and Hay Company of Cincinnati, is named as the chairman. This committee is one of the most important ones of the Association, and the appointment of Mr. Granger as chairman is a recognition of the Cincinnati man's ability and knowledge of railroad matters and terminal facilities, which are the features to which the committee pays particular attention.

The committee in full consists of W. W. Granger, Cincinnati; George S. Bridge, Chicago; Walter Kirwin, Baltimore; Mr. Sales, of Studebaker, Sales & Co., Bluffton, Ind., and Robert Thorne, Pittsburg.

Canadian farmers are said to be reluctant to sell their hay on an export basis, but unless they do so they will lose some of the English export trade which they could handle. An exporter of Montreal recently bought 40 carloads of Ohio clover hay which were exported via Boston.

The report of the Iowa State Crop Bureau on the 1896 crop of hay is as follows: Hay (tame), acres, 2,250,960; average yield, 1½ tons per acre; total 3,376,040 tons; value, \$15,193,980. Prairie hay, acres cut, 1,550,000; average yield, 1½ tons per acre; total product, 2,325,000 tons; value, \$7,672,500. Millet and Hungarian hay, acres cut, 90,000; value, \$540,000.

The crop review or final report of the Missouri State Board of Agriculture on the crops of 1896 places the acreage of hay at 2,360,000 acres, or practically what it was in 1895, and the yield has been increased from 1¼ tons per acre to 1½ tons for 1896, giving a total yield for the state of 3,540,000 tons, against 3,000,000 tons for 1895. The quality of the product was good, but late cutting was damaged by continued rains.

The John E. Hall Commission Co. announces that it has succeeded the firm of Goddard & Hall, the well-known hay men of St. Louis, Mo. The new firm consists of John E. Hall, president; John E. Naughten, vice-president; G. W. Millsbaugh, secretary and treasurer. There will be no change in the management at St. Louis, but a branch house will be opened in New York or some point in the South. The company has a branch house at New Orleans.

There are plenty of reputable hay dealers in every large city to whom shipments may be made with every assurance of safety, but these honest firms do not hold out fascinating offers of big prices. The sharks do that, because, as they do not intend to pay anything, they can afford to make very glowing offers. Shippers should remember that it is much better to accept market prices for produce and get the money, than it is to accept offers above the market and get nothing.—Packer, Kansas City.

The opportunities for swindling hay shippers have been recognized for a long time, and many rascals have entered this particular field of felonious enterprise, says the Kansas City Packer, which gives a case in point. A farmer of Kullychaha, I. T., shipped twelve cars of hay to the Western Shipping and Commission Co., La Salle and Adams streets, Chicago, last summer, the firm promptly acknowledged the receipt of the hay, but no returns were made. Then the farmer drew on the company, but the draft was not honored. Finally, he placed the account in the hands of a lawyer, who wrote that a collection was impossible. The shipper lost about \$700, and doubtless others suffered similarly with the same concern. The Packer says: There are thousands of shippers who never pause to investigate the standing of a firm that solicits their consignments. They seem to assume that because a man enters business (or is supposed to) in a large city and sends out nicely printed stationery and flattering offers, he is gilt-edged. A little investigation would show that no such firm as the Western Shipping and Commission Company, Chicago, appears in the commercial agency books or in the city directory.

REVIEW OF CHICAGO HAY MARKET.

The prices for hay ruling in the Chicago market during the last week, according to the Trade Bulletin, were as follows:

During the week ending January 9 receipts were 4,413 tons, against 5,410 tons the previous week; shipments 552 tons, against 707 tons for the previous week. A large portion of the daily arrivals of both timothy and prairie was of poor quality, being wet and in a heating condition. For this class of stock the market ruled exceedingly dull, and it was almost impossible to effect sales, even at very low figures. Strictly choice, sound hay, especially timothy, was in good demand all through the week, and a firm feeling prevailed. Prices advanced \$0.50 @1.00 per ton, and the market closed at outside figures. Wet and heating hay sold at very irregular prices—depending entirely on the condition. Sales of Choice Timothy ranged at \$9.00@10.50; No. 1, \$8.00 @9.00; No. 2, \$6.50@8.00; No. 3, \$7.00; not graded, \$6.00@8.25; No Grade, \$3.00@6.00; Choice Prairie, \$7.50@9.00; No. 1, \$6.50@7.00; No. 2, \$5.50@6.50; No. 3, \$5.00; No. 4, \$4.00; No Grade, \$4.00@4.50. Rye straw sold at \$5.00@6.00; wheat straw at \$4.00, and oat straw at \$4.00@5.00.

In the suit of E. McNeill, receiver, against the Liverpool, London and Globe Insurance Company, the jury recently returned a verdict against the insurance company for \$72,000, the amount sued for. The suit was brought to recover insurance on property belonging to the Oregon Railway and Navigation Company that was destroyed by the burning of their large elevator at Portland three years ago.

CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

INDIANA, Goshen, Elkhart Co., Jan. 4.—Growing wheat in this vicinity is looking well, and with a little more snow I think it is safe from freezing. WM. G. CLARK.

SOUTH DAKOTA, Richland, Union Co., Jan. 1.—About two-fifths of the wheat is in farmers' hands; receipts have been very light on account of bad weather and farmers hold for higher prices. Wheat is selling at 62 to 65 cents per bushel. J. C. WAGNER.

TEXAS, Pilot Point, Denton Co., Dec. 27.—The crop prospects for wheat in this North Texas were never more promising than at present in the history of the state. From Fannin County on the east, to Wilbarger County on the west, and south to Bosque and Erath counties, the reports are increased acreage from 10 to 25 per cent. over last year. The growing prospects are all that could be desired. A little rain would of course be of some advantage. In the western counties irrigation either from deep wells or tanks will be introduced and great results are anticipated. We anticipate for 1897 the largest crop of wheat ever harvested in the history of the state. E. B. KRONE.

IOWA.—J. R. Sage, Director of the Iowa Crop Service, in his final crop report for 1896, says the crop of winter wheat was 3,351,550, average yield 17 bushels, average price 60 cents. SPRING WHEAT, total yield 7,047,235 bushels, average yield 13 bushels, average price December 1, 57 cents. CORN, total yield 313,692,210 bushels, average yield 39 bushels to the acre, average price 14 cents. OATS, total yield 73,450,000 bushels, average yield 22 bushels per acre, in weighed bushels. RYE, total yield 1,946,720 bushels, average yield 16 bushels. BARLEY, total yield 15,881,618 bushels, average yield 29 bushels. BUCKWHEAT, total yield 147,580 bushels, average yield 17 bushels. FLAX, total yield 1,891,716 bushels, average 9½ bushels. TIMOTHY SEED, total yield 646,000 bushels, yield 3.8 bushels per acre. CLOVER SEED, total yield 122,000 bushels, average 2 bushels. BROOM CORN, 8 of a ton per acre.

MICHIGAN, Lansing, Jan. 11.—Secretary Washington Gardner, of the Michigan Department of State, in his January crop report says, in answer to the question, "Has wheat, during December, suffered injury from any cause?" 163 correspondents in the state answer "yes," and 508 "no," and in answer to the question, "Has the ground been well covered with snow during December?" 38 correspondents in the southern counties answer "yes," and 378 "no," in the central counties 6 answer "yes," and 152 "no," and in the northern counties 8 answer "yes," and 64 "no." The total number of bushels of wheat reported marketed in December is 993,569, and in the five months, August-December, 5,689,243, which is 359,519 bushels more than reported marketed in the same months last year. The average prices January 1 of some of the principal farm products in the markets where farmers usually market such products were as follows: The average price of wheat was 84 cents per bushel; of corn 23 cents, and of oats 18 cents, and the average price of hay was \$7.73 per ton. Compared with January 1, 1896, there has been an increase in the prices of all farm products named in this report excepting corn, oats, hay, hogs and dressed pork. The average increase in the price of wheat is 25 cents per bushel. Corn has declined 9 cents and oats 3 cents per bushel and hay \$5.39 per ton.

MISSOURI.—From the Crop Review of the Missouri State Board of Agriculture issued recently we take the following: CORN.—Condition was estimated at 85, and the acreage as compared with 1895 at 95 per cent., showing a reduction in condition of 23 points, and in acreage of 5 points. This estimate gives an acreage of 6,250,000 acres, a yield of 32 bushels per acre, and a total yield of 200,000,000 bushels. This is thought to be conservative at least, possibly below the actual product. WHEAT.—Acreage harvested was placed at 1,550,000 acres for 1895, and was reduced to 1,271,000 for 1896. The unfavorable conditions for seeding in fall of 1895, the failure of the seed to germinate, causing a large area to be plowed up, and the low price then prevailing, have been causes for this decrease. The yield for 1895 was estimated at 11 bushels per acre, and for 1896 at 10 bushels, giving a total yield for the state of 12,710,000 bushels. In the northeast section this grain suffered damage in the shock estimated at 23 per cent., in the northwest 10 per cent., in the central 8 per cent., southwest 5 per cent., and the southeast 9 per cent., or an average damage for all sections of the state of 11 per cent. The condition for seeding wheat over the state for fall of 1896 was not so favorable as might have been desired. In some counties the ground was too dry, while in others continued rainfall rendered

seeding impossible. The acreage for the state was reported the same as last season with an increase of 5 points in the southwest section, and a decline of 7 in the southeast. The seed generally germinated well, and the young plant made a vigorous growth. OATS practically covered the same area as for 1895, estimated at 1,140,000 acres, but the yield declined from 30 bushels per acre to 19 bushels, or from a total yield of 34,200,000 bushels for 1895 to 21,660,000 bushels for 1896. The promises of this crop for June and July were not realized. Fields and localities that promised a phenomenally large yield about the time the head was forming were struck by rust, resulting, in many instances, in complete destruction, some correspondents reporting that the value of the crop in their locality would not pay for the binding twine. In others the plant was harvested, but the grain was light and of reduced value, and the yield not one-third what the vigorous growth had promised. After cutting and shocking, continued rains, which prevented stacking or thrashing, did immense damage in many localities, estimated at 19 per cent. for the state. In the northwest section this damage was the most severe, amounting to 35 per cent. of the crop, and in some localities correspondents said "The grain and straw is so completely rotted that they will neither be thrashed nor stacked." TOBACCO.—Estimated area 10,000 acres; total yield for state 6,680,000 pounds, against 7,500,000 for 1895. COTTON.—Acreage for the state of 57,609 acres. Yield 13,941,378 pounds, against 12,144,000 pounds for 1895. POTATOES were decreased in acreage 7 per cent., leaving an area of 90,000 acres, and the reported yield for the state of 87 bushels per acre gives a total of 7,830,000 bushels, against 10,000,000 bushels for 1895. FLAX.—The approximate area for the state in 1896 was 60,000 acres, and an estimated production of half million bushels of seed.

Items from Abroad

Bavarian millers have petitioned the government for protection against French competition.

The Mexican government has restored the import duty of 14 cents on corn. It was reduced in the summer to enable that country to secure a stock owing to loss of crop by drouth.

Sweden imported during November 58,000 quarters (of 480 pounds each) of wheat, and 9,000 sacks of flour, as compared with 71,000 quarters of wheat, and 10,000 sacks of flour during October.

France imported for interior consumption during November 34,000 quarters (of 480 pounds each) of wheat and flour. The net import of these breadstuffs for the four months ending November totaled 234,000 quarters, compared with 532,000 quarters in corresponding four months last season.

The Swiss Custom House returns for the third quarter of 1896 give the imports as 478,500 quarters of wheat (of 480 pounds each), and 73,500 sacks flour. The total imports of breadstuffs for the twelve months ending Sept. 30, 1896, amounted to 1,950,000 quarters, the biggest quantity yet reached in a single twelve months.

An astute Englishman, E. T. Hooley of London, proposes a great scheme for levying a tax on imported wheat. He suggests that a fixed duty of five shillings (\$1.25) per quarter be levied on imported wheat, and that the proceeds be invested in a pension fund to provide all indigent persons above 60 years of age with a pension of fifteen shillings (\$3.75) weekly.

The first cargo of corn which has ever been shipped from the United States to India was shipped from Philadelphia recently. The British government purchased 140,000 bushels of corn in this country, which was taken to India. The corn will be distributed by government agents, and will be planted in hope of producing a crop to alleviate in a measure the impending famine in India.

Russian exports during 1896, compared with the two previous years, were: Wheat (in quarters of 480 pounds), 1896, 15,245,000; 1895, 16,500,000; 1894, 14,323,000. Rye (in quarters of 480 pounds), 1896, 5,428,600; 1895, 5,920,000; 1894, 5,270,000. Barley (in quarters of 400 pounds), 1896, 6,463,200; 1895, 8,680,000; 1894, 12,477,000. Oats (in quarters of 304 pounds), 1896, 7,685,400; 1895, 8,100,000; 1894, 10,854,000. Corn (in quarters of 480 pounds), 1896, 626,500; 1895, 1,200,000; 1894, 3,211,000.

The new Bourse laws of Germany which went into effect January 1 excite the greatest discontent among Bourse operators. It is recognized on all sides that the regulations cannot be made workable, and bankers and dealers alike concur in the opinion that it is impossible to see how a law insisting upon registration of Bourse transactions can be made operative. Most of the bankers have decided to do business with the clients after January 1 precisely as they did before, and then test the question in the courts as to time operations being unlawful. A meeting was held in Berlin, January 10, of delegates from

nearly all of the Prussian trade centers, at which it was decided to found an organization of the German grain and produce trades, with the center in Berlin.

Russian and Black Sea exports from August 1 to December 25 included, wheat, 12,179,000 quarters, of 480 pounds each, in 1896, 10,781,000 quarters in 1895; barley, 5,525,000 quarters, of 400 pounds each, in 1896, 5,712,000 quarters in 1895; corn from November 1 to December 25, 348,000 quarters, of 480 pounds each, in 1896, 408,000 quarters in 1895.

Sweden imports from August 1 to November 30, compared with the same time of the previous year, included, wheat, 210,500, against 339,000 quarters (of 480 pounds each); rye, 122,000, against 282,000 quarters (of 480 pounds each); barley, 12,200, against 40,000 quarters (of 400 pounds each); corn, 10,800, against 21,000 quarters (of 480 pounds each); flour, 30,500, against 119,000 sacks; rye meal, 26,500, against 88,000 sacks.

Holland imported from August 1 to November 30, compared with the same time of the previous season, wheat, 2,455,000, against 2,051,000 quarters (of 480 pounds each); rye, 1,037,100, against 928,000 quarters (of 480 pounds each); barley, 810,500, against 840,000 quarters (of 400 pounds each); corn, 871,000, against 587,000 quarters (of 480 pounds each); oats, 1,248,000, against 571,000 quarters (of 304 pounds each); wheat flour, 272,000, against 228,000 sacks; rye flour, 125,500, against 100,000 sacks. Exports during the same periods were, wheat, 2,027,500, against 1,446,000; rye, 632,000, against 497,000; barley, 673,500, against 555,000; corn, 433,000, against 234,000; oats, 982,000, against 419,000; wheat flour, 36,000, against 30,000; rye flour, 66,000, against 31,000.

It was reported under date of December 28 that during the preceding week no rain had fallen in the affected districts of India, and rain was urgently needed to save the recent sowings in Bombay. In the Northwest Provinces and Oudh famine has been declared in three more districts. A detailed report from the Central Provinces speaks of acute distress as likely in four districts, and less acute in nine other districts; in four districts it is hoped that only the poorest will be affected. Test or relief works are now open in 13 districts. At a meeting of the city council of Calcutta January 7 it was reported that the timely rains in November and December had saved India from the greatest calamity of the century, so widespread and severe was the drouth.

Fires - Casualties

C. D. Fuller's elevator and coal shed at Aylmer, Ont., were recently destroyed by fire.

Sweet Bros' elevator at Royal Center, Ind., was destroyed by fire at 7 a. m. December 24, together with a quantity of grain. Loss \$10,000.

The Rich Hill Grain Co.'s elevator at Rich Hill, Mo., was destroyed by fire recently, the origin of which is unknown. Loss \$2,500; insurance \$1,000.

A fire starting from an oil stove destroyed Anderson & Moynihan's grain store at North Creek, N. Y., December 30. The loss is partially covered by insurance.

F. E. Cady's elevator at Tecumseh, Neb., was damaged by a fire of unknown origin to the extent of \$400 January 6. Little grain was in the elevator at the time.

Hiatt Bros' elevator at Wheatland, Ind., was destroyed by fire on December 26. The loss on the building and grain was \$10,000, and there was no insurance.

Brooks Bros' elevator at Edinburg, N. D., was destroyed by fire December 14, together with about 12,000 bushels of wheat and flax. The loss is covered by insurance.

Bailey Bros. & Kearney's grain office and scales at Ulrich, Ill., were destroyed by fire on the night of January 4. The fire is said to have been of incendiary origin.

Schuman & Co.'s elevator and warehouse at Covington, Ohio, was destroyed by fire December 24. The origin of the fire is unknown. It was partially covered by insurance.

T. W. Glass, a grain buyer, while in his office at Welch, Kan., December 30, was held up and shot twice, from the effects of which he died. Two men were arrested on suspicion.

John Hannah recently had his leg crushed in the elevator at Mansfield, Ill., and notwithstanding all efforts were made to save it, it had to be amputated above the knee. Mr. Hannah is about 30 years old, and has a family.

H. J. Hoagland's elevator at Coles, Ill., was burned December 14, together with about 3,000 bushels of corn. There was a total insurance of \$1,100, about one-third the loss. The fire is supposed to have caught from a passing train, and is the second instance of the burning of an elevator at that place

in the last five months. Mr. Hoagland is undecided as to whether he will rebuild.

The elevator of McCabe Bros., at Glosston, N. D., was destroyed by fire recently, together with 500 bushels of barley and 12,000 bushels of wheat. The origin of the fire is unknown. The property is said to have been insured.

W. M. Darter's elevator at Ladoga, Ind., was damaged by a fire at 4 a. m., on December 27, which originated in adjoining buildings. Some baled hay and straw were destroyed, but otherwise little damage was done.

During a storm on the night of January 4, G. S. Maynard's elevator at Waubay, S. D., was moved from its foundation about 20 feet, and one side of the elevator was knocked in. It contained several hundred bushels of grain.

The Great Western and Andrews & Gage's elevators at New Rockford, N. D., were destroyed by fire recently. There were 15,000 bushels of wheat in the Great Western Elevator, and 10,000 bushels in Andrews & Gage's elevator.

Eli Arnaud's warehouse at San Antonio, Texas, which was occupied by F. Pizzini and filled with grain and hay, was destroyed by fire December 26. Loss on building \$600, insurance \$400; loss on grain and hay \$400, insurance \$200.

The Mooney-McHugh Elevator Co.'s elevator at Langdon, N. D., was destroyed by fire December 31, together with 10,000 bushels of grain. Total loss about \$2,000. The fire was of incendiary origin. Two other elevators caught fire, but were saved without material damage.

One side of elevator No. 1, belonging to the W. H. Ketzbeck Milling Co. of Wells, Minn., burst January 1, and let 3,000 bushels of wheat into the mud. It is said that the total damage will not exceed \$100. Severe losses are sometimes prevented by having an elevator erected by reliable engineers.

S. E. Smith's grain and feed store at Rutland, Vt., were destroyed by fire at 3 a. m., December 31. The building contained 1,200 bushels of oats, 25 tons of corn and corn meal, 50 tons of bran, and considerable hay, grass seed, flour, etc., which was damaged. The total loss is \$6,000; insurance \$1,300. A great deal of the stock will be saved. The fire is supposed to have originated in a freight car on a sidetrack.

The P. B. Mann Elevator at Bellingham, Minn., operated by the Minnesota and Western Grain Company of Minneapolis, burst December 24, wrecking the east side of the building and spilling about 10,000 bushels of wheat on the ground. The object of scientific elevator construction, as practiced by legitimate contractors and engineers, is to erect the building so it will stand all strains to which elevators are subjected.

The New Brighton Elevator at New Brighton, Minn., owned by the City Elevator Company, was burned at 1 a. m., January 6. The capacity of the elevator was 300,000 bushels, and at the time of the fire there were 150,000 bushels in the bins. The total loss on the elevator and contents is in the neighborhood of \$100,000; insurance \$42,000 on the building; \$36,500 on grain. The elevator was in charge of G. E. Chapman, the secretary of the company, and was erected some years ago. It has not been determined yet whether to rebuild or not.

OUR CALLERS

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

I. T. Vaniman, of Vaniman & Son, Virden, Ill.
J. Silas Leas, of The Barnard & Leas Mfg. Co., Moline, Ill.

C. G. Hammond, of The Huntley Mfg. Co., Silver Creek, N. Y.

B. F. Ryer, Secretary of The Huntley Mfg. Co., Silver Creek, N. Y.

W. H. Chambers, Secretary Grain Dealers' National Association, Des Moines, Iowa.

Mr. Frank Myers of Burr Oak, Kan., claims the world's record on husking corn. He husked 170 bushels of corn in ten hours and twenty-five minutes, and his friends will back him against anyone who wants to husk.

It must not be forgotten that it is due to the elevator men that the grain trade of Chicago was saved some ten or a dozen years ago. Grain was leaving this center and going around us because of discriminations made against us in freight rates. Our grain business was threatened with extinction. At this juncture the elevator men stepped in as buyers and offered such inducements to Western shippers that Chicago again became one of the greatest grain markets of the world. To be sure, the elevator men were not entirely unselfish in the matter. They wanted to increase their storage and make money. —Chicago Times-Herald.

Court Decisions

Public Elevator Men Enjoined Not to Deal in Grain.

IN THE CIRCUIT COURT OF COOK COUNTY.

People Ex Rel. Attorney General, vs. Central Elevator Company.

Mr. Henry S. Robbins and Assistant Attorney General Schofield, counsel for the people.

Mr. John P. Wilson, Mr. John J. Herrick, Mr. James E. Munroe and Mr. Jacob R. Custer, counsel for the elevator companies.

TULEY, C. J.:

It is unnecessary to review the voluminous pleadings in this case. It is sufficient to state that this is an information filed by the attorney general against the defendant corporation, licensed under the state law of 1871 to carry on the business of a grain warehouse of Class A under said statute, seeking to enjoin the defendant from buying, storing and mixing its own grain with that of others stored in its public warehouses, or, in other words, from dealing in grain and mixing the same with that of its customers.

The defendant company substantially admits that it has for a considerable time dealt in grain and stored and mixed grain, bought by it in its public warehouses, and alleges that it is advised by counsel that it could lawfully do so. This is one of nine suits brought by the attorney general against certain corporations, firms and individuals, owning or operating the twenty-nine public warehouses in the city of Chicago. The defendants in these suits are all licensed as public warehousemen, and although some of the licenses include the privileges of dealing in grain, the issue in all the cases is practically the same, as the license could confer no right to deal in grain unless the law under which it issued would justify such dealing.

This litigation involves the construction of the statute of 1871 concerning warehouses and the rights of public warehousemen under said act to deal in grain and mix the same with that of their customers, stored in such public warehouses.

First, the court finds that prior to 1850 the business of the storage of grain in warehouses in the city of Chicago was of but little importance. With the completion of the Illinois and Michigan Canal in 1848, and the entry of railroads into the city of Chicago, which commenced about the same time, the city rose rapidly to be a great grain market, and at the time of the passage of the law of 1871 was admittedly the greatest grain market of the world.

In the city of Chicago the warehouses purchased grain from wagons up to about 1853, and also for several years thereafter from canalboats, and they stored the grain so purchased, with grain that they had in store for their customers. The extent to which such warehouses prior to 1853 stored grain for other people does not clearly appear from the evidence.

In 1871 and for a few years prior thereto it had been customary in Chicago when a warehouse had reached its storage capacity for the proprietor to offer a rebate of a part of the storage charges to induce depositors and shippers to draw out and ship grain, and at other times the proprietor when he found his warehouse full, and unable to meet demands for storage, would buy his own warehouse receipts through commission men or brokers and ship out grain from his warehouse to make storage room, but the purchases of these warehouse receipts were made in such a manner that it was not generally known to persons engaged in buying and selling or shipping grain in the Chicago market.

I find that the evidence fails to show that in the city of Chicago there was in 1871, or prior thereto, any well-known, general or uniform custom or usage for warehousemen to deal in grain, and store and mix grain bought by them with that of their customers. While the evidence, as stated, fails to show any long continued, well-known and uniform custom for warehousemen to deal in grain, such as would incorporate such custom into the constitution of 1870 and the law of 1871 and make it practically a part thereof, it must be admitted that the constitutional debates show that it was alleged in convention that the warehousemen in the country did deal in and mix their own grain with that of their customers, and that the warehousemen in the city of Chicago in some manner in combination with the railroad, "to a large extent controlled the grain market of Chicago."

There being no well-known, general or uniform usage of warehousemen, to deal in grain and mix it with their customers', which, under the decision of the courts, would enter into the law and control in the construction, where the construction was doubtful, the question arises, has there been such practical construction of the act by the state officers, i. e., the Board of Warehouse Commissioners, or such acquiescence (assuming the warehouse commissioners could exercise any control) in the warehousemen of Class A dealing in grain and mixing the same with that of their customers, as would estop the state from bringing this information?

The great weight of the evidence is to the effect that the warehousemen of Chicago did not commence

to so deal in grain to any general extent until about the year 1885; that the practice has grown so rapidly that now and for two or three years last past they are the principal buyers and sellers on the Chicago market, and upon the Chicago Board of Trade; that by reason of the advantages they possess, and by reason of certain changes in the grain trade, they have practically driven out of business the class of men who were before them engaged in buying and shipping grain on the Chicago market. And it is admitted that they have dealt in grain to the extent that they now own at least three-quarters of all the grain stored in the public warehouses of the city of Chicago, and it also appears by the evidence that they are fast monopolizing the business of dealing in grain in the Chicago market.

Did or do the changed conditions and methods of doing business authorize or justify the warehousemen in Chicago (Class A) in going into the business of dealing in grain and mixing their grain with that of their customers? It would seem to be clear that if the right to deal in and mix grain did not exist at the time of the passage of the act of 1871, no subsequent change in the grain trade or method of transacting the grain trade could confer the power or justify such dealing in grain.

The practical construction given the act by the warehousemen of Chicago (Class A), since about the year 1885, by dealing in and mixing their own grain in their own public warehouses, with that of their customers, can have no effect in determining the construction of the act of 1871; nor is there any ground for the contention that the Board of Warehouse Commissioners, or other state agents or departments, have given a practical construction to the law of 1871, or that they have acquiesced in the practical construction given the act by the warehousemen themselves so as to estop the state from maintaining this information.

It appears to the court that the question resolves itself into this, whether the said acts of the defendant corporation in dealing in grain and mixing it with the grain of its customers is an ultra vires act, i. e. did it, in so doing, go beyond the purposes for which it was created or licensed? What relation do these public warehouses occupy as to the state and public under the act of 1871?

These public warehouses (Class A), licensed under the act of 1871, may be said to be creations of the state as they cannot exist without such license. They are licensed for the carrying on of the business of public warehouse for the storing of grain in bulk, and in which the grain of different owners is mixed together. Whether the warehouse or business is carried on by a corporation or an individual makes no difference as to the rights of such corporation or such individual so carrying on a warehouse business, as the rights of such corporations and such individuals so carrying on the warehouse business are the same under the law.

Being public institutions in the nature of public agencies, whether carried on by an incorporated company or an individual, they cannot exceed the legitimate scope of the authority conferred by their license and the act of 1871, nor go beyond the purposes for which they were created. It would hardly be contended that a railroad could go into a warehouse business or into the grain trade. In the Munn case the Supreme Court say that "public policy would forbid the transaction of a warehouse business by a common carrier." The decision places warehousemen and railroads upon the same footing as being engaged in a public employment and exercising a sort of public office.

The defendant is created and licensed to carry on the specific business of a public warehouse and to use its property for that purpose, no limit being placed upon the amount of the capital that may be employed. Although the license contains no express prohibition against the dealing in grain, yet the license, like the charter of a corporation, may be regarded as a contract between the licensee and the public in which there is an implied contract that the warehouseman will engage in no other business than that for which he is licensed. Being a public warehouseman with the privileges belonging thereto, it would also appear to be against public policy that he should use his capital, his public warehouse, for the purpose of trading in grain. Being licensed for one purpose, created by the constitution and the law for one specific business, is it not opposed to public policy that this defendant should carry on in competition with the general public another and different business, and a business in which its interests must necessarily be brought into conflict with its duties in exercising this "sort of public office?"

Can it be seriously contended that the framers of the constitution, and that the legislature that passed the act of 1871, could have contemplated that the time would arrive when public warehousemen exercising "a sort of public office," when a public institution in the nature of a state agency would own three-quarters of all the grain in store in the city of Chicago? If they can own three-quarters, why may they not own all? Why may they not fill their warehouses with their own grain and thereby become incapable of storing grain for the public? They can do no act which may disable them from serving the public as public warehousemen. To re-

strain corporations and public institutions of this nature within the scope of the purposes of their creation is well defined public policy.

It is in evidence that they not only own this large proportion of the grain stored in their public warehouses, and also are the principal buyers of grain in the Chicago market, but that nearly all of them deal in "futures." It is easy to perceive the temptation they would be under as to mixing the grain of their customers, and also to control the market by the ownership of such a vast proportion of the warehoused grain. It is also easy to perceive in selling grain the temptations they would be under to abate or remit storage charges in order to effect sales.

It may be that they are not "trustees" in the sense that the equitable rule that "a trustee will not be allowed to place himself in a position where his self-interest will conflict with his duties," applies, but every public institution, every public agency, like every chartered corporation, is to some extent a "trustee" for the public in the exercise of the powers and duties conferred upon them, as the public have an interest in the proper administration of such powers and the performance of such duties.

In the case at bar it is shown that the public warehousemen of Chicago, being licensed to carry on a warehouse, have used their capital, to wit, their warehouses and their business as warehousemen, to aid them in trading in grain in competition with the public, and having a great advantage over such public in such trading, by reason of their control of such licensed public warehouses, they have become the principal buyers and sellers of grain in the Chicago market and upon some lines or systems of railroads centering in Chicago, almost the only buyers.

This raises the further question whether or not, while engaged in the public employment or business of warehousing, they should be allowed to use their warehouse in carrying on another business, such as dealing in grain, and thereby obtain practically a monopoly of the immense grain trade of this great grain center, where there was received by rail in 1895 over 200,000,000 bushels of grain. A monopoly is abhorrent to the common law and the public policy of the state as manifested by its legislation, which has always been to prevent and restrain monopolies, combinations and trusts.

It will be seen from the debates of the constitutional convention that one evil sought to be remedied by the peculiar legislation as to warehouses inserted in the constitution was to prevent a monopoly or combination claimed to exist between the railroads and the warehousemen in the great grain center of Chicago.

This tendency to a monopoly has not decreased, as the evidence shows that in 1895 twenty-nine public warehouses, with a capacity of 41,000,000 bushels, were controlled by less than twenty corporations or firms. The evidence in this case shows that buying and selling of grain is fast becoming monopolized by the owners of these public warehouses, each warehouse or set of warehouses on a particular railroad or system of railroads being the principal and in some cases almost the only buyers on such railroad or system; the location of such warehouses on the Chicago termini of such railroad or system giving them an advantage not possessed by other buyers who have no public warehouses.

The evidence shows that the warehouse proprietor often overbids private bidders for grain on "track," offering as much as a quarter of a cent a bushel more, and then immediately reselling the same grain to such private bidders at a quarter of a cent less than he, the warehouseman, paid, requiring, however, the buyer to take the grain from the warehouse within a limited number of days. In this way the warehouseman makes storage which more than compensates him for the loss of the quarter of a cent a bushel on the sale. It is evidently to the advantage of the warehouseman to have as much grain as possible pass through his warehouse, and there is not only the temptation to rebate storage to effect sales, but his warehouse receipts being given credit because of being issued by a public warehouseman, he is able to turn his capital engaged in the grain trade into money quicker than he could otherwise do, and thus his business as warehouseman to overcome opposition to him as a grain dealer. It would seem as if this was using his warehouse business certainly in a manner not contemplated by the law of 1871, or the constitution of 1870.

It is, however, contended that the warehouseman gets the grain because he pays more for it than other bidders; that the constitution of the state requires the law passed in pursuance thereof to be construed "in the interests of the producer," therefore it is to the interest of the producer that the warehouse be allowed to enter into the grain business. No monopoly in grain dealing can operate in the long run to the interest of the producer. There is no truer maxim in economics than that "competition is the life of trade." The warehouseman may be able to pay more than outside shippers or buyers until he has driven them out of the market; when he has succeeded in so doing (and the evidence shows that that time has nearly arrived) and he has practically no competition, then the producer must suffer. The law should not be so construed as to give the warehouseman the right to use his privilege, his pub-

lic business as a warehouseman, to crush out competition against himself as a dealer in grain. To so construe the law it appears to the court would be to construe it in the interests of the warehouseman, and not as intended by the constitution, in the interests of the "producer and shipper."

It is also contended that every man has a right to trade in grain. This may be true as to every private individual, but if he is exercising a kind of public employment, and is licensed to carry on a business impressed with a public use, with certain duties and privileges by reason of such license, the question is, "Is it, or not, against public policy that he be permitted to use such public employment, such public business, and such privileges to aid him in carrying on in competition with the public another and different business, and in such a way as to create in himself a 'virtual monopoly' of such latter business?" It appears to the court that there can be but one answer to the question, and that in the affirmative.

It is urged that private interests, that of the middlemen, the brokers and commission merchants, are back of this prosecution. I do not see how that can influence the legal question involved. It is, unfortunately, the fact that but few attempts to maintain public rights by informations of this nature are made except when backed by private interests, but, if public interests are involved, the court must ignore the private interests, if any, instigating the prosecution of this cause.

It is also urged that the attorney general asks the court to enter a decree never before entered by any court, and that the effect will be disastrous to the defendants in this case and more disastrous to the important grain trade of Chicago; that, as warehousemen in other grain centers deal in grain, the consequence will be that the grain trade will be diverted from Chicago.

I have considered the "consequences" if the decree for an injunction is to go into immediate effect. If the case is reversed the defendants are without remedy for damages, as the state gives no indemnifying bond. I am of the opinion that it would be just to these defendants to give them time to arrange their business so as to conform to the decree entered herein, and so that before the decree goes into full execution the defendants may apply for a supersedeas to the Supreme Court if they desire to do so.

I am of opinion that a reasonable time for such purposes would be four months; I will, however, hear suggestions, which may be made by counsel upon this point if they desire to make any. A decree in favor of the people may be prepared in accordance with the views expressed.

Late Patents

Issued on December 15, 1896.

Baling Press.—Benj. F. Martindale, Wichita, Kan., assignor of one-third to Edwin R. Mead and Edward E. Hale, Ft. Scott, Kan. No. 573,023. Serial No. 586,365. Filed April 6, 1896.

Gas Engine.—Fitz E. Culver, Chicago, Ill. No. 573,209. Serial No. 596,275. Filed June 20, 1896.

Igniter for Gas Engines.—Frank J. Rettig, North Manchester, Ind., assignor to the Buckeye Mfg. Co., Anderson, Ind. No. 573,296. Serial No. 581,964. Filed March 5, 1896.

Valve Device for Gas Engines.—Walker L. Crouch, New Brighton, Pa., assignor to the Pierce-Crouch Engine Co., same place. No. 573,322. Serial No. 569,830. Filed Nov. 22, 1895.

Issued on December 22, 1896.

Gas or Vapor Engine.—Geo. S. Tiffany, Highland Park, Ill., assignor of one-half to Thos. F. Wheelright, same place. No. 573,628. Serial No. 564,386. Filed Oct. 2, 1895.

Speed Regulator for Gas Engines.—Emil Capitaine, Frankfort-on-the-Main, Germany, assignor to Geo. T. Harris, Philadelphia, Pa. No. 573,642. Serial No. 592,591. Filed May 22, 1896.

Grain Separator.—Reuben W. Rossiter, Minneapolis, Minn. No. 573,706. Serial No. 580,586. Filed Feb. 24, 1896.

Gas Engine.—John Charter Jr., Sterling, Ill. No. 573,762. Serial No. 591,121. Filed May 11, 1896.

Hay Press.—Chas. E. Jones, Hillsboro, Texas. No. 573,785. Serial No. 593,212. Filed May 27, 1896.

Issued on December 29, 1896.

Mixer for Gas Engines.—Frank M. Underwood, Upper Sandusky, Ohio. No. 574,183. Serial No. 541,704. Filed March 14, 1895.

Expansion Gas Engine.—John W. Eisenhuth, San Francisco, Cal. No. 574,311. Serial No. 590,630. Filed Oct. 5, 1893. Renewed May 7, 1896.

Grain and Seed Cleaner.—Thos. J. Hatfield, Dublin, Ind. No. 574,354. Serial No. 577,028. Filed Jan. 27, 1896.

Grain Proportioner and Mixer.—Franklin S. Rit-

ter, Cheboygan, Mich. No. 574,270. Serial No. 600,271. Filed July 23, 1896.

Issued on January 5, 1897.

Automatic Weighing Apparatus.—Wm. E. Nickerson, Cambridge, Mass., assignor to the New England Weighing Machine Co., Boston, Mass. No. 574,445. Serial No. 596,488. Filed June 22, 1896.

Gas Engine.—Gustaf Joranson, Berwyn, Ill. No. 574,610. Serial No. 563,053. Filed Sept. 20, 1895.

Gas Engine Attachment.—Geo. W. Lamos, Ft. Madison, Iowa. No. 574,614. Serial No. 589,705. Filed April 30, 1896.

Apparatus for Washing and Stoning Grain.—Joseph Senior, Wakefield, England. No. 574,633. Serial No. 548,307. Filed May 6, 1895. Patented in England May 1, 1893, No. 8,702.

Gas Engine.—Carl L. Grohmann, Hartford, Conn. No. 574,535. Serial No. 585,647. Filed March 30, 1896.

Conveyor.—Pelle Anderson, Philadelphia, Pa., and Alvin C. Seymour, Warren, R. I. No. 574,652. Serial No. 576,969. Filed Jan. 27, 1896.

Gas Engine.—Walker L. Crouch, New Brighton, Pa., assignor to the Pierce-Crouch Engine Co., same place. No. 574,670. Serial No. 570,665. Filed Nov. 30, 1895.

Gas or Oil Engine.—Eugene Fessard, Poissy, France. No. 574,723. Serial No. 580,799. Filed Feb. 26, 1896. Patented in France, April 13, 1895, No. 246,621; in Belgium, Oct. 14, 1895, No. 117,872; in England, Nov. 13, 1895, No. 21,574; and in Austria, Dec. 20, 1895, No. 454,984.

Oil, Gas, or Like Engine.—Walter Rowbotham, Birmingham, England. No. 574,762. Serial No. 589,774. Filed April 30, 1896.

Baling Press.—Alva E. Anderson, Clarksville, Texas. No. 574,771. Serial No. 564,184. Filed Sept. 30, 1895.

Baling Press.—Wm. J. Pearce, Pilot Point, Texas, assignor to the W. J. Pearce Hay Press Co., Dallas, Texas. No. 574,817. Serial No. 588,752. Filed April 23, 1896.

THE MILLERS' NATIONAL INSURANCE COMPANY.

Secretary W. L. Barnum of the Millers' National Insurance Company of Chicago, which, by the way, insures more grain elevators than any other company in the world, in his report to the Insurance Department of the state of Illinois says: Everyone who has contributed to the success of our organization may well feel proud of the results attained.

The permanent fund, so wisely provided for in the formation of the company, has kept pace with its liabilities, and will continue to increase as new risks are assumed. Every policyholder should know that, however extended our business may become, and whatever may be the aggregate at risk, the permanent fund will always be in due proportion.

Since the reorganization of this company twenty-one years ago, the President, the Vice-President, the Secretary, the Assistant Secretary, and the Cashier, have labored continually and faithfully side by side, in its interest, and the result as here presented tells its own story, and needs no further comment. With the same conservative management that has controlled the company's affairs in the past, and made it such a pronounced success, there is every reason to believe that its future will continue prosperous and successful.

The entire assessments levied during the past year have amounted in all to only 10 per cent. of the deposit notes in force, or one-half the annual rate usually charged by board companies, equal to an annual cash dividend of 50 per cent. This has been about the average cost and saving for the past twenty-one years to members of the Millers' National Insurance Company.

The twenty-first annual statement of the Millers' National Insurance Company, issued Jan. 1, 1897, is as follows:

ASSETS.	
Cash assets.....	\$582,620.94
LIABILITIES.	
Losses adjusted and due....	None
Losses in process of adjustment, including all reported or supposed losses.....	\$17,056.47
Reinsurance reserve.....	76,983.30
Guarantee deposits.....	96,859.53
All other liabilities.....	460.77
Total liabilities.....	\$ 191,360.07
Net cash surplus.....	\$ 391,260.87
Deposit notes subject to assessment (net value).....	1,511,329.71
Surplus over all liabilities	\$1,902,590.58
Aggregate amount of admitted assets.....	2,093,950.65
Losses incurred during 1896..	210,810.93
Losses paid since organization.	\$2,361,268.31

THE MARKETS

[We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.]

Grain report of Collins & Co., Cincinnati, January 8.—Trade conditions since the holidays generally has ruled quiet. Heavy and severe rains, followed by rough and wintry weather over a large section of the country, making roads impassable, has curtailed the movement of grain and produce to market, at the same time stimulating the consumption, causing an active inquiry to exist at the close, with a hardening of values and indications pointing strongly to a further improvement in prices under light receipts and an enlargement of the demand. WHEAT—The foreign situation is the main factor governing the market. Trade locally is reported slow as millers complain of the small demand for flour at existing prices. Wheat values continue fairly steady and sympathize more or less with the tendency in the outside markets. No. 2 Red at 92¢@93 cents, Choice at 94 cents, No. 3 Red at 84¢@85 cents, No. 4 Red at 78¢@80 cents, Sample rejected range from 65¢@76 cents, as to quality and condition. CORN—Market ruling stronger and higher under small arrivals. Local industries absorbing about all the offerings at current prices. A rather liberal movement before a great while is generally anticipated. No. 2 White at 23¢@23½ cents, No. 2 Yellow at 22½¢@22½ cents, No. 2 Mixed at 22¢@22½ cents, No. 3 White at 22¢, No. 3 Mixed at 21¢@21½ cents, market closing firm. EAR CORN—Inquiry is small; demand moderate. Choice Yellow at 22¢@22½ cents, Mixed and White at 20¢@21 cents. On and after January 15, 1897, the Ear Corn Bushel in this market will be computed at 68 pounds instead of 70 pounds. OATS—The demand ruling is fully equal to the offerings and values are well sustained. The off grades, light weight, damaged and musty samples for mixing purposes rule active and more readily at current quotations. No. 2 White at 21¢@21½ cents, No. 3 White at 18¢@19 cents, Rejected White at 16½¢@17 cents, No. 2 Mixed at 18¢@19 cents, No. 3 Mixed at 17¢@17½ cents, Rejected Mixed at 17½¢@16½ cents, with the market well cleaned up. RYE—Is slow with but little inquiry except for good plump stock for milling or distilling account. No. 2 at 36 cents, Choice at 40¢@42 cents, No. 3 at 32¢@33 cents, Rejected at 28¢@30 cents. HAY—Receipts for the week 750 tons, shipments 394 tons. For the corresponding week last year the receipts were 1,021 tons, shipments 375 tons. The few arrivals have strengthened the market considerably, and a good active inquiry at higher prices exists for No. 1 and Choice Timothy. There is also some improvement in the demand for good bright clover and clover mixtures, but all other grades such as No. 2 over-ripe, stack streaked, stained, musty and damaged hay are slow of sale and move at low prices. Choice Timothy at \$11.00@11.25, No. 1 at \$10.25@10.50, No. 2 at \$8.00@8.50, No. 3 at \$6.00@7.00, No. 1 Clover at \$9.00@9.25, No. 2 at \$7.00@7.50, No. 1 Clover Mixed at \$8.50@9.00, No. 2 at \$7.00@7.50, Prairie, Choice upland at \$8.00@8.50, No. 1 at \$7.50@8.00. Straw inquiry is small, Bright wheat clean and sound at \$5.00@5.50, Rye at \$6.50@7.00, Oat at \$4.50@5.00. MILLFEED—Scarce and the demand is more urgent. Bran at \$7.50@8.00, Middling at \$8.50@9.00, Choice White at \$9.50.

BOOK NOTICES.

NEBRASKA GRAIN BUYERS' ASSOCIATION.—We have received a copy of the constitution and by-laws of the Nebraska Grain Dealers' Association. It is a neat 8-page pamphlet well arranged and printed. J. E. Utt of Omaha is the Secretary of the Association.

REPORT OF KANSAS STATE BOARD OF AGRICULTURE.—We are indebted to Secretary F. D. Coburn of the Kansas State Board of Agriculture for a copy of its tenth biennial report. Probably more than any of its predecessors it is planned to be an "agricultural" volume instead of an immigration document. It is intended to be helpful in promoting the prosperity and advancement of the population the state already has, rather than to persuading others to settle there. It contains information upon the methods and cost of raising corn in Kansas; the raising, value and uses of the sorghums for forage and grain; the construction of silos and the making, using and advantages of ensilage; cow culture, or dairying; steer and heifer beef; proceedings of the Board, and some addresses delivered at its quarter-centennial meeting; and other agricultural data. Also the state's decennial census of 1895, together with tables, statements, summaries and diagrams showing the population, products, progress, assessed valuations and general development of the state. While the limited edition lasts the volume can be had free, but the legislature has not as yet provided postage for its distribution, hence those who desire an early copy should remit 30 cents in stamps for it to F. D. Coburn, Secretary Board of Agriculture, Topeka, Kan.

Considerable quantities of Canadian coarse grains are going forward to the British markets, consisting of peas, oats, rye and barley. The last named cereal is for feed purposes.

Scott K. Shively, president of the Sheridan Milling and Elevator Company, says that for the first time in the history of Northern Wyoming wheat commands a price that makes it profitable to ship it out of the state, and as far east as Kansas City, Omaha and St. Louis. He has shipped 67 carloads of wheat.

[From Prime's Crop Bulletin.]

AN INDISPENSABLE WORK.

FOR MILLERS, ELEVATOR DEALERS, GRAIN COMMISSION MERCHANTS, GRAIN BUYERS AND SELLERS AND FIRMS AND CONCERNS WHO DESIRE TO REACH THIS CLASS OF CUSTOMERS.

In answer to numerous inquiries, our representative called at the office of Clark's Grain Dealers' and Shippers' Gazetteer, the 1897-98 edition of which is now being compiled rapidly for publication. While the plan and scope of the work was always commendable and the edition of '95-96 one of the greatest helps to all concerns interested in the grain industry, a most striking feature in the coming issue will be seen in the material enlargement and the extraordinary care—alone conducive to correctness and completeness—with which the publisher is performing his almost infinite task. As before remarked, the 1896 edition was practically perfect for all business purposes, but this fact easily becomes apparent upon an inspection of the 1896 edition and a comparison with the one which is now offered.

The former edition contained 389 pages, 9x12 inches, handsomely bound in cloth, in the making up of which the lists of over 100 railroads were taken into account—while in the foregoing edition the flouring mills, elevators, grain commission merchants, track buyers, dealers and shippers, on more than 200 of the leading railroads of the United States, including, in fact, all roads of any value to people interested in the grain trade, will be represented, and these lists will entirely cover the United States, thus rendering the publication invaluable to those desiring to reach the individuals and firms engaged in this most important branch of the national commerce. Thus, whether a firm is buyer or seller, at a glance it can be seen to which class it belongs; flouring mills, elevators, and, in fact, all the various lines being distinguished by different type being used to designate them. Typographically, the Gazetteer for 1897-98 will show marked improvements in every feature, although it has been necessary to cleverly economize space, in order to bring the publication within the limits of a volume convenient to handle; but even now it will make between 400 and 500 pages, and contain approximately four times the amount of information which it presented in the 1896 work.

It is not often that Prime's Crop Bulletin unreservedly commends a work, yet in the present instance, after the most searching examination and investigation of the work, it does so most emphatically, knowing that the book proved a notable achievement in its peculiar field, affording a very large amount of concise, accurate and therefore most valuable information for all concerns interested in this line of business. The absolute correctness of the work can be relied on since the lists are official, being furnished by the freight departments of the 200 transportation lines cooperating in it, and under directions from headquarters the station agents all along the various roads have made up the lists of firms and individuals, and these have been arranged alphabetically as to towns and names. The work is edited by that veteran printer and publisher, Alfred C. Clark, late manager of the Chicago Times, and the circulation of the work for 1896 was over 15,000 copies, and already nearly that number have been bespoken for the 1897-98 edition. The concerns who were fortunate enough to have been subscribers to the work need no reminder of the worth of the same, and our advice to those firms in this and auxiliary lines of business who are not subscribers is to subscribe at once. The price of this great work is so very low that none should be without it. The work has our unqualified and honest indorsement.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

MILL AND ELEVATOR AT A BARGAIN.

A 50-barrel roller steam mill with grain elevator attached will be sold at a bargain on easy terms. Address

JOHN C. THOMAS, Urbana, Ill.

FAIRBANKS GASOLINE ENGINE FOR SALE OR EXCHANGE.

I will sell one No. 4 Fairbanks gasoline engine, or will exchange for large steam engine and boiler. Address

HENRY NOBBE, Farmersville, Ill.

15,000-BUSHEL INDIANA ELEVATOR.

A 15,000-bushel elevator in good grain country for sale. Two railroads and no competition in town. Twenty-five-horse power steam engine, corn sheller and cleaner, wheat and small grain cleaner, hopper scale and other equipments. Price \$3,000 cash. No trade. Address

ELEVATOR, A, care "American Elevator and Grain Trade," Chicago, Ill.

ILLINOIS ELEVATOR AT A BARGAIN.

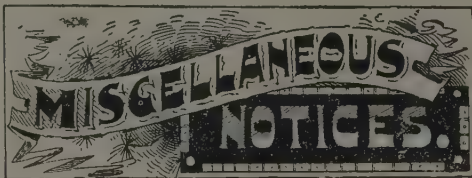
A 30,000-bushel elevator and implement building in good corn and oats section in Central Illinois, on the Illinois Central Railroad, for sale. Power furnished by gasoline engine. This elevator is in fine condition, and the purchaser will find it a bargain. Terms reasonable. For full particulars address

A. D., M, care "American Elevator and Grain Trade," Chicago, Ill.

IOWA ELEVATOR.

For sale, a 10,000-bushel steam elevator equipped with sheller, cleaners, 44,000-pound hopper scales, wagon dumps, roller feed mill, team scales, office and fixtures, 50,000-bushel crib capacity. All in good repair. Crib alone rent for \$500 per year. Only grain elevator in Portsmouth. Last season's shipment 625 cars oats, corn and wheat. Price \$4,000. Address

MONAHAN BROS., Portsmouth, Iowa.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

REPRESENTATIVE WANTED.

Wanted, representative for Minneapolis and the Northwest. Address

WELLER MFG. CO., mill and elevator machinery, Chicago, Ill.

LAND TO EXCHANGE FOR ELEVATOR.

I will exchange 160 acres of Nebraska land in good location for an elevator that can be taken down and moved in Illinois, or for lumber to build same. Address

W. T., A, care "American Elevator and Grain Trade," Chicago, Ill.

PROPOSALS FOR HAY WANTED.

Sealed proposals, in triplicate, will be received here and at offices of quartermasters at Forts Reno and Sill, Okla., until 11 o'clock a. m., central time, Feb. 2, 1897, and then opened, for furnishing hay at those posts during fiscal year ending June 30, 1897. Proposals for delivery at other points will be entertained. Government reserves right to reject or accept any or all proposals, or any part thereof. Information furnished on application here or to quartermasters of stations named. Envelopes containing proposals should be marked "Proposals for Hay," and addressed to undersigned, or quartermasters of stations named.

M. I. LUDINGTON, A. Q. M. G., Chicago, Ill.

**GRAIN BAGS—BURLAPS.**

All kinds of Bags,
New and Second Hand.

ORDERS FILLED PROMPTLY.

W. J. JOHNSTON,

Factory and Office,
182 Jackson Street, CHICAGO.

ROOFING AND SIDING.**JAMES A. MILLER & BRO.**

129 and 131 South Clinton Street, CHICAGO.

Corrugated Iron Roofing and Siding

Material Only or put on Complete.

Special pains are taken to get out these materials so they can be cheaply put on and make a good job.

**DURABLE—EASILY APPLIED.**

This roofing is manufactured from natural Trinidad asphalt materials, and will not dry up and become brittle under exposure to the weather as coal tar roofings do. *Send for free sample of roof 12 years old, with circular and price list to*

WARREN CHEMICAL & MFG. CO.,
56 Fulton St., New York, U. S. A.

SEND ORDERS FOR

HARD
SOFT
BLOCK
BLACK-
SMITH

COAL
COKE

Best Grades
Best Prices
Best Deliveries

TO MILES & COMPANY,

MINE AGENTS AND SHIPPERS.

PEORIA, ILL.

E. R. Ulrich & Son,

SHIPPERS OF

WESTERN GRAIN,

ESPECIALLY

High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago & Alton Ry., C. P. & St. L. Ry., and St. L., C. & St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building,
SPRINGFIELD, ILLINOIS.

Write for Prices Delivered.

TO POULTRY RAISERS.

The Complete Poultry Manual is a neat little work which is well worth reading by those interested in poultry, or by boys or girls who want to turn an honest penny. The price is only 25 cents. Sent postpaid on receipt of price. Address

MITCHELL BROS. CO.,

184 Dearborn Street, Chicago Ill.

COMMISSION CARDS.

[We will not knowingly publish the advertisement of a bucket-shop keeper or irresponsible dealer.]

H. B. SHANKS.

Established 1873.

S. H. PHILLIPS.

Shanks, Phillips & Co.,

COMMISSION MERCHANTS,

HAY, CORN, OATS, BEAN, CHOPS, FLOUR AND CORN MEAL.

306 Front St., Memphis, Tenn.

Refer to Union and Planters' Bank. Cash advances on B. of L.

ACCOUNTS OF GRAIN DEALERS

OR ORDERS FOR

Speculative Investments

On the CHICAGO BOARD OF TRADE SOLICITED.

Call at our office or write for private Cipher Code or Shippers Grain Record.

McLAIN BROS. & CO.,

RIALTO BUILDING, CHICAGO,

COMMISSION CARDS.

SHIP YOUR GRAIN

—TO—

P. B. & C. C. MILES,COMMISSION MERCHANTS,
PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES
QUICK RETURNS.REFERENCES:—Commercial Nat. Bank, Peoria Savings, Loan &
Trust Co., Peoria.**F. H. PEAVEY & CO.,**

Minneapolis,

GRAIN RECEIVERS.

Minn.

Consignments Solicited.

MILLING WHEAT A SPECIALTY.

M. F. BARINGER,

...SUCCESSOR TO...

J. R. TOMLINSON & CO.,

...GRAIN AND MILL FEED...

416-418 Bourse Bldg., Philadelphia, Pa.

Correspondence with millers and grain dealers solicited. Sight
draft with bills of lading attached honored on all shipments.**COLLINS & CO.,**

STRICTLY COMMISSION

Grain, Hay and Mill Feed.

CINCINNATI, OHIO.

LEMAN BARTLETT.

O. Z. BARTLETT

L. Bartlett & Son,GRAIN AND PRODUCE
COMMISSION MERCHANTS.

BARLEY A SPECIALTY.

Room 23 Chamber of Commerce Bldg.
Milwaukee, Wis.

Careful attention given to orders from Brewers, Maltsters and Millers

E. P. MUELLER,

Shipper of Wet Feed,

From Chicago, Milwaukee and La Crosse.

Particular attention paid to the shipments
of mixed ear lots.

860 Calumet Bldg., 189 La Salle St., CHICAGO.

Will pay the highest prices for Wet and Dried Brewers'
Grains, Dried Distillers' Slops, Starch Feed,
Damaged Wheat, Hominy Feed and Barley Sprouts
under yearly contracts
Write for estimates F. O. B. cars your city.**COMMISSION CARDS.**

B. WARREN.

B. WARREN JR.

WARREN & CO.,

Grain Commission Merchants,

ROOMS 7 AND 9 CHAMBER OF COMMERCE,

Peoria, Ill.

EDWARD P. MERRILL,

Millers' Agent.

Flour, Grain and Mill Feed.

OFFICE:

21-2 Union Wharf, PORTLAND, MAINE.

No consignments wanted.
Letters Promptly Answered.All sales direct.
I want a good Corn Account.

J. F. ZAHM.

F. W. JAEGER.

F. MAYER

ESTABLISHED 1879.

000

J. F. ZAHM & CO.,

Grain and Seeds,

TOLEDO, - - - OHIO.

Send for our "RED LETTER." It'll keep you posted.

Established 1868.

S. W. FLOWER & CO.,GRAIN AND SEED
MERCHANTS. . .

TOLEDO, - - OHIO.

High grades of Clover, Alsike and Timothy Seed
a Specialty.
If you want to buy, sell or consign, please corre-
spond with us.**Martin D. Stevers & Co.**

Commission Merchants,

218 LA SALLE STREET, - CHICAGO.

We make a specialty of selling by sample

Barley, Wheat, Rye, Oats, Corn, Flax and Timothy Seed.

Grain, Seeds and Provisions for future delivery
bought and sold on margins.

PHILIPP BENZ.

EMIL P. BENZ.

PH. BENZ & CO.

ESTABLISHED 1872.

COMMISSION MERCHANTS

GRAIN, SEEDS AND HAY,

WHEAT, CORN, OATS, RYE, BARLEY, FLAX, GRASS SEEDS, HAY.

Rooms 204-205 Omaha Bldg., Chicago.

REFERENCES: Bank of Commerce, Chicago. Mercantile Agencies
LIBERAL ADVANCES MADE ON CONSIGNMENTS.**COMMISSION CARDS.****J. J. BLACKMAN**ASSOCIATED WITH
L. E. BUNKER

COMMISSION

MERCHANT.

Flour, Grain, Hay, Feed, Beans, Peas, Lentils,
Seeds, Corn Goods, Etc.

274 Washington Street, - - NEW YORK.

E. L. ROGERS & CO.,ESTABLISHED
1863.

COMMISSION

MERCHANTS

GRAIN, Flour, Seed, Hay and Straw.

358 Bourse Building, PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports fur-
nished gratuitously on application. Correspondence solicited.References: { Corn Exchange National Bank.
Manufacturers National Bank.
Merchants National Bank.

ESTABLISHED 1879.

LEDERER BROS.,**GRAIN and SEED**

Commission Merchants,

BALTIMORE, - - MD

We give careful attention to every shipment, are always pre-
pared to make cash advances on consignments. We make a
specialty of handling spot goods, which we either sell after ar-
rival or hold if requested. We solicit your trade as we do a strictly
commission business. REFERENCES: Merchants National Bank,
Baltimore, Md., and the Commercial Agencies.**GEO. N. REINHARDT & CO.,**

MELROSE STATION, NEW YORK CITY.



We sell on Commission and buy direct,

HAY, GRAIN AND FEED.

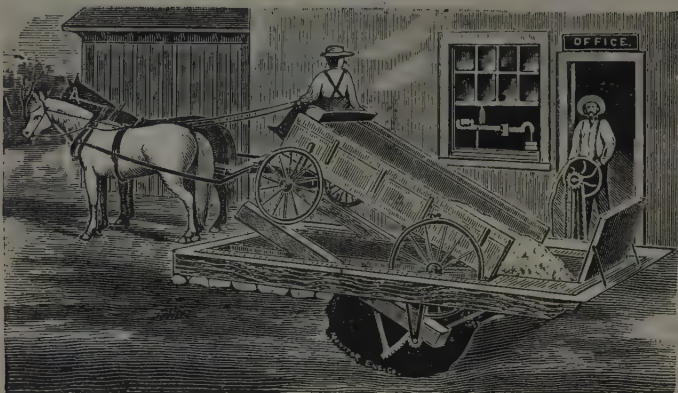
Storage capacity 8,000 bales, 30,000 bushels.
Let us know what you have to offer.**PRICE REDUCED 66 PER CENT.****Cawker's American Flour Mill and Elevator Directory.**

FORMER PRICE, \$10.00.

PRESENT PRICE, \$3.50.

We have a limited number of Cawker's American Flour Mill and Elevator Directory on hand, which we will
sell at \$3.50 per copy. They will not last long at this price, so speak quick if you want one. We will
furnish a copy of the Directory and a year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE
for \$4.50.Address **MITCHELL BROS. CO.,** 184 and 186 Dearborn St., CHICAGO, ILL.

Gold Dollars



At FIFTY CENTS apiece are CHEAP, but they do not represent a better investment than we offer the "elevator and grain trade" in our

Controllable Wagon Dump.

WINCHESTER, ILL., February 4, 1896.

MESSRS. SAVAGE & LOVE CO., Rockford, Ill.

GENTLEMEN:—Your favor of the 28th ult. received and noted. Last July I put one of your Controllable Wagon Dumps in a Fairbanks, Morse & Co.'s 22-ft. scale, and it has given me entire satisfaction in every respect. In this locality the bulk of grain is as yet handled in sacks, and by tipping the Dump about one-half it makes a nice slant, making it very easy to pull the sacks to back end of wagon, where strings are cut and grain run out into bin below. Every farmer, without exception, speaks in glowing terms of the merits of this Dump. In unloading loose grain from wagon there is no dump that will equal yours in being easily handled and always under control of operator. No scaring horses, no dropping of wagon and no noise. I consider a grain elevator incomplete without the Savage & Love Controllable Wagon Dumps.

Yours truly,
M. C. WOODWORTH.

MANUFACTURED ONLY BY

THE SAVAGE & LOVE CO., Rockford, Ill.

FAIRBANKS, MORSE & CO., St. Paul, Minn., Northwestern Agents.

THE OLD WAY.



For NEW and BEST Way

UNION IRON WORKS,

DECATUR, ILL.,

Manufacturers of the CELEBRATED

Western Shellers and Cleaners

The "Best in the World."

Elevator Supplies of All Kinds a Specialty.

We are the Pioneer Elevator Builders of the West, and claim priority in the building of Cheap Elevators with Increased Conveniences. Don't BUILD until you get our Plans and Prices. Write for Catalogue.

DUNEBARGER'S

Hay and Grain Record

Gives history of each car from date of purchase to final settlement. Profit and Loss quickly seen; arrangement perfect, and a great aid in your business, also checking up accounts. Try it and you will not do without. Every Shipper or Receiver, large or small, wants it. Copyrighted.

Price, \$3.00, Containing 200 Pages.
—ADDRESS—

M. DUNEBARGER, - Fayette, O.

Trucks and Sack Holders.

Improved Trucks

Combination Truck and Step-Ladder, and Single Trucks, Sack Holders and Stand.

Best Boiler Compound recipe, the right to manufacture and use, with instructions. Price.....\$1.00

Combination Truck and Step-Ladder and Single Truck for.....\$3.00

Prices for larger number given. Write for prices and circulars. Circulars free.

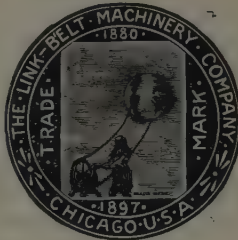


PEERLESS MFG. CO., Springfield, Ohio.

LINK-BELT MACHINERY CO.,

Engineers :- Founders :- Machinists

CHICAGO.

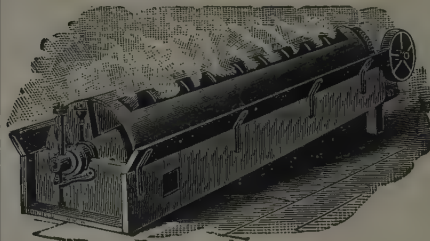


Shafting, Pulleys, Gearing,
Shaft Bearings, Friction Clutches,
Rope Sheaves, Manilla Rope,
Rope Dressing, Grain Trippers,
Grain Shovels, Car Movers,
Wagon Dumps, Elevators and Conveyors, etc.

LINK-BELT ENGINEERING CO., Philadelphia and New York.

DAMP WHEAT can be PUT in CONDITION for GRINDING or STORAGE

By using our



STEAM DRYER.

Which is also a successful
Wheat Heater or Temperer
or Dryer for Washed
Wheat or Bran.

It leaves the Wheat in Perfect Condition for the Rolls. Will also dry

Malster's, Brewer's and Distiller's Wet Grain.

Not an Experiment. In successful use 25 years drying

CORN MEAL AND HOMINY,

BREWERS' GRITS AND MEAL,

BUCKWHEAT, RICE AND

ALL CEREAL PRODUCTS.

ALSO SAND, COAL DUST, GRAPHITE AND CLAY AND ORE OF ALL KINDS!

Automatic in operation, requiring no attention. Double the capacity of any other Dryer sold for same price.

THE CUTLER CO., North Wilbraham, Mass.

Roper's Practical Hand-Books for Engineers.

Hand-Book of Land and Marine Engines	Price, \$3 50
Hand Book of the Locomotive.....	" 2 50
Catechism of High-Pressure Steam Engines.....	" 2 00
Use and Abuse of the Steam Boiler	" 2 00
Engineer's Handy Book.....	" 3 50
Questions and Answers for Engineers.....	" 3 00
Care and Management of Steam Boilers.....	" 2 00
Instructions and Suggestions for Engineers.....	" 2 00
The Young Engineer's Own Book.....	" 3 00

These books embrace all branches of Steam Engineering—Stationary, Locomotive, Fire and Marine. Any engineer who wishes to be well informed in all the duties of his calling, should provide himself with a full set. They are the only books of the kind ever published in this country, and they are so plain that any engineer or fireman that can read can easily understand them. Address

Mitchell Bros. Co., 184 Dearborn Street, Chicago.

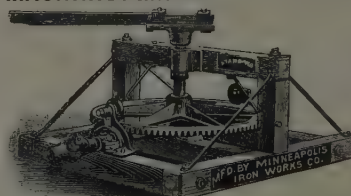
MINNEAPOLIS IRON WORKS,

D. M. GILMORE, Prop.,

COMPLETE OUTFITS FOR

MACHINIST and BOILER MAKER.

Grain Elevators,



Grain Elevator Machinery, Boxes, Hangers and Shafting, Elevator Buckets, Boot Tanks, Sprocket Wheels, the Standard Horse Power (single and double gear), Detachable Chains and Attachments, Wood and Iron Pulleys, etc., etc.

Repairs Receive Prompt Attention.

OFFICE 23 SECOND STREET NORTH
SHOPS AT 900 FOURTH STREET SOUTH

MINNEAPOLIS, MINN.

JEFFREY

Roller, Steel and Special Chains
—FOR—
**ELEVATING
AND CONVEYING
MACHINERY**
FOR HANDLING MATERIAL OF ALL KINDS.
**POWER TRANSMISSION
MACHINERY.**
COAL MINING MACHINERY.
Wire Cable
Conveyors.
For long and short distance conveying.

THE JEFFREY MFG. CO. 163 Washington St.
Columbus, Ohio. NEW YORK.
Send for Catalogue.

“The official lists of the grain dealers, shippers, flouring mills, elevators and commission houses of any one of the 27 of the principal cities is alone worth many times this small sum and this is the only work which contains these lists, and they are correct and revised to date, besides the many thousands and thousands of places all over the country where grain is bought and sold!”

BEGIN THE YEAR 1897 RIGHT!
SEND A CHECK FOR \$3.00 BEFORE TOO LATE
\$24.00 Worth of the Most Valuable and Up-to-Date Advertising and Works relating to the GRAIN TRADE **FOR \$3.00**
AND GET

Read the Greatest Offer Ever Made to anyone who Operates an Elevator or Flouring Mill, who is a Grain Buyer or Seller, a Grain Commission Merchant, a Track Buyer or Seller, or ANYONE WHO DESIRES TO REACH ANY OF THIS CLASS OF CUSTOMERS.

SEND YOUR CHECK FOR \$3.00 and You Will Get the Following Works and Advertising. Worth **\$24.00**, Expressage Fully Prepaid.

Clark's Grain Dealers' and Shippers' Gazetteer for 1897-98, 500 pages, 9x12 inches, bound in cloth.....	regular price, \$ 5.00	} TOTAL \$24.00
Space of fourteen agate lines for your advertisement in same.....	regular price, 10.00	
*Clark's Grain Dealers' and Shippers' Gazetteer for 1896, 300 pages, bound in cloth.....	regular price, 5.00	
Ropp's Commercial Calculator, 150 pages, the greatest work of the kind on earth for any grain man, worth \$10.00.....	regular price, 1.00	
Every Day Facts: a Condensation of a \$25.00 Encyclopædia, 484 pages, 7x10 inches.....	regular price, 1.00	
One Year's Subscription to Prime's Crop Bulletin, issued 24 times a year.....	regular price, 2.00	

ALL FOR \$3.00 WITH ORDER, Expressage Fully Prepaid. Was Ever Such an Offer Made Before? Think of It! **FOR \$3.00.**

CLARK'S GRAIN DEALERS' and SHIPPERS' GAZETTEER FOR 1897-98

Containing the Official List of Flouring Mills, Elevators, Grain Dealers, Shippers and Commission Merchants Located on ALL THE RAILROADS THROUGHOUT THE UNITED STATES AND CANADA.

To the Individual or Firm Receiving this Issue of the Elevator and Grain Trade:

GENTLEMEN:—Your business is located on one of these railroads somewhere in the U. S., and your name has been furnished for the work by the officials of said road, as the work is issued under their indorsement and with their co-operation. To print here all the roads represented would take up too much room. Should your firm, however, be a subscriber to **Clark's Grain Dealers' and Shippers' Gazetteer** for 1896 you are aware of the value of the works and advertising above mentioned, and that you paid the amount asked for the entire list for the book alone. Eighty per cent. of the subscribers have renewed, as before, without premiums or advertising space as offered above. The 1897-98 edition of this work (now being compiled) will include the lists of **more than one hundred railroads not appearing in work for 1896**. It will be between 400 and 500 pages, handsomely bound in cloth, and the work will be good for the years 1897 and 1898. The roads being alive to the importance of the work, every line represented gives the lists the most careful revision, so that absolute accuracy is guaranteed. Besides, the millers and elevators will be marked so that you can tell at a glance whether a firm belongs to the milling, elevator, grain buying or commission class. It contains the Grain Inspection Rules of the leading Boards of Trade, including Minneapolis, Philadelphia, Milwaukee, St. Louis, Detroit, Chicago, Cincinnati, Toledo, etc., the list of officers of the leading Boards of Trade and other information of interest and profit to proprietors of elevators, flour mill owners, grain dealers and shippers, commission houses and track buyers, and concerns who desire to reach this class of customers. The price of the work hereafter will be \$5.00, but should you feel like taking advantage of the above you may do so, if you send your remittance—in that case you can have the entire list sent by express fully prepaid for only \$3.00. Here's an opportunity to get an immense amount of up-to-date information and valuable advertising for a very small sum. Any of the items mentioned are worth more than the price asked for all. Remember, only \$3.00 pays for the entire lot. Send at once so as not to be too late, and inclose "copy" for your advertisement. Write advertisement plainly, as "proof" cannot be shown. Address

CLARK'S GRAIN DEALERS' AND SHIPPERS' GAZETTEER, 10th Floor Adams Express Building, Chicago.

It Has Occurred to Us

That all an advertisement might say would not influence you as much as to print (as we do below) THE NAMES OF OLD SUBSCRIBERS WHOSE ORDERS FOR THE 1897-1898 WORK WERE RECEIVED IN ONE DAY'S MAIL RECENTLY. It shows the diversity of the circulation of this great work and the high esteem in which it is held. Do you believe these hard-headed business men would send a RENEWAL for a work that did not pay them? They paid the price asked and received no premiums. You get \$24.00 worth for \$3.00. Send at once. (*See foot note.) There are also a few letters from old advertisers in the previous work who send renewals for 1897-1898. Your advertisement ought to pay you the same or even better than it does them. A medium that an advertiser who has thoroughly tested it says is good must be VERY GOOD. Send us your order at once.

Chase, Hibbard Milling Co., Elmira, N. Y.	Watertown Roller Mills, Watertown, S. D.	Davis & Co., Elevators, Nevada, Mo.	Oriental Roller Mills, Butler, Pa.
The Weston Mill Co., Scranton, Pa.	The Outter Co., North Wilbraham, Mass.	Edward J. Wilkins, Pittsburg, Pa.	California Store Co., California, Pa.
Jesse Jones & Son, Norfolk, Va.	Bernier & Co., St. Hyacinthe, Can.	C. M. McLaughlin, Unity, Pa.	Campbell, Morrell & Co., Passaic, N. J.
J. Chas. McCullough, Expr., Cincinnati, O.	Miner, Hillard Flour Mills, Wilkesbarre, Pa.	G. L. McLane & Co., Union Mills, Ind.	E. B. Mohood, Pittsburg, Pa.
Southern Grain Co., Kansas City, Mo.	B. L. Bridges & Co., Memphis, Tenn.	Hertz & Keever, Kansas City, Mo.	G. C. McKay, Palmer, Neb.
Santona Roller Mills, Santona, Iowa.	S. L. Hamilton, Ashland, Ind.	W. M. Reid, Grain, Bucyrus, O.	The Cerealine Mfg. Co., Indianapolis, Ind.
Saginaw Milling Co., Saginaw, Mich.	G. W. Kennedy & Son, Shelbyville, Ill.	Mercer & Kulp, Phoenixville, Pa.	C. L. Houghton, Springfield, Mass.
Chas. A. Ayres & Co., Martinsville, O.	S. R. Low, Cuba, N. Y.	E. R. Ulrich & Son, Springfield, Ill.	Waples, Painter & Co., Munster, Tex.
Griffiths & Hayes, Agt. Imp., Paoli, Kan.	Caughay & Curran, Detroit, Mich.	J. D. Nichols & Son, Noble, Ill.	W. B. Crowder, Pottsville, Tex.
Ballard & Ballard Co. Mill, Louisville, Ky.	Howell & Webster, Middletown, N. Y.	C. F. Sneeble & Co., Sherman, Tex.	J. B. Stringer & Co., Chatham, Ont.
McCord & Kelly, Columbus, O.	Schwartz & Co., Walecott, Iowa.	Chas. H. Lindner, Valparaiso, Ind.	M. Bowes & Co., Bath, N. Y.
J. H. Hennesch & Co., Cincinnati, O.	J. S. Lewis & Co., Lockhart, Tex.	E. F. Grover, Grain, Glyndon, Minn.	DeJonge & VanHeulen, Grand Rapids, Mich.
Enterprise G'n Elevator, Binghamton, N. Y.	Henry Lytle & Sons, Somers, Wis.	C. O. Matheny & Co., Springfield, Ill.	Henry Booklage, Marthasville, Mo.
L. Frersdorf & Son, Hudson, Mich.	R. L. LeBlanc, Grain, Chetawa, Miss.	Robt. Elliot & Co., Grain, Milwaukee.	J. L. Ottaway & Co., Flushing, Mich.
Pnn Yan Roller Mills, Penn Yan, N. Y.	G. A. Richards, Grain, Guilford Center, N. Y.	A. Sperling, Dewey, Ill.	H. C. Amberg, Hickman, Ky.
McFarlane Mill Co., Sherbrooke, Quebec.	J. S. Liggett, Grain, Wellsburg, W. Va.	Alden F. Hays, Grain, Sewickley, Iowa.	Monon Elevators, Vincennes, Ind.
Dwight M. Baldwin, Jr., Graceville, Minn.	John Wade & Sons, Memphis, Tenn.	W. A. McLogan & Co., Carroll, Iowa.	W. A. Holland, Ft. Ritner, Ind.
Logan & Co., Grain, Nashville, Tenn.	George H. Swearingen, G. Store, Dunbar, Pa.	R. J. Gothers, Hastings, Pa.	

"In the Opinion of the Leading Millers, Elevator Owners, Grain Merchants, Buyers and Sellers, it is the Best Work Ever Issued."

Sandwich Enterprise Company.

SANDWICH, ILL., Dec. 2, 1896.
 Clark's Grain Dealers' & Shippers' Gazetteer, Chicago, Ill.
 Gentlemen:—We have yours of the 27th ult., and have concluded to place our advertisements in the Gazetteer which you are getting ready for publication, accepting your offer, which we understand is the same as made last year which we used. We sign order and inclose same herewith. You may use the same full page advertisement as before, page 87, in your publication. You may also use the central page "ads." as found on pages 122, 134, 136, 138, 44, five in all.
 Yours truly,
 SANDWICH ENTERPRISE CO.,
 By W. H. Robertson, Asst. Secy.

The S. Howes Co.

SILVER CREEK, N. Y., Dec. 2, 1896.
 Clark's Grain Dealers' & Shippers' Gazetteer, Chicago, Ill.
 Gentlemen:—We are in receipt of yours of the 25th and will state that we will take the page in your new book. We have never received a copy of the former book that you issued. The writer was in Chicago recently and saw one of your books at the American Miller office, at which time we took your name with the intention of writing you for a copy of the book, which please send us on receipt of this letter, as we are entitled to it and can use it to good advantage. Kindly send it promptly and oblige. We would just as soon use the copy that is in the old book.
 Yours very truly,
 Per F. L. Cranson, Secy. THE S. HOWES CO.,

The Case Manufacturing Co.

COLUMBUS, OHIO, Dec. 2, 1896.
 Clark's Grain Dealers' & Shippers' Gazetteer, Chicago, Ill.
 Gentlemen:—In response to your letter of recent date we inclose to you order for renewal of full page advertisement in the Grain Dealers' & Shippers' Gazetteer for the years 1897-1898. It may be of interest for you to know that our year's advertisement in the Gazetteer was a valuable one to this company, and we confidently believe that greatly aided our trade, and it is with pleasure that we renew the same for the year above indicated.
 Wishing you abundant success, we remain,
 Yours truly,
 THE CASE MANUFACTURING CO.,
 By J. F. Oglevee, Vice-Prest.

Send your order at once. \$3.00 pays for all, to be sent express charges fully prepaid. Don't forget to send "copy" for advertisement at same time. Address

CLARK'S GRAIN DEALERS' AND SHIPPERS' GAZETTEER, 10th Floor Adams Express Bldg., CHICAGO, ILL.

*The first 200 firms sending in their subscriptions will receive 1896 book free, as above mentioned. As we have only 200 of these books on hand, send in your orders quickly, with the "copy" for your 14-line advertisement. Write advertisements plainly as we cannot send proof of same.

JAMES STEWART & CO.,

ENGINEERS AND CONTRACTORS FOR GRAIN ELEVATORS,

RAILROAD WORK AND HEAVY STRUCTURES,
ST. LOUIS AND BUFFALO.

CONSTRUCTION DEPARTMENT—WORK IN 1895.

GRAIN ELEVATORS:

500,000-bushel Elevator, with Marine Leg and Conveyor House 940 feet long, for the New Orleans & Western R. R. Co., Port Chalmette, La.
200,000-bushel Elevator for the Geo. F. Plant Milling Co., St. Louis, Mo.

RAILROAD BUILDINGS:

Two Freight Warehouses, each 115 x 625 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.
Eighty Cotton Warehouses, 62 x 98 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.

RIVER AND HARBOR:

Dock and Warehouse, 225 x 1,500 feet for the New Orleans & Western R. R. Co., Port Chalmette, La.

MISCELLANEOUS:

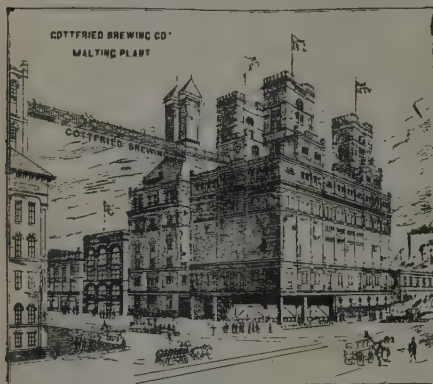
85,000 Spindle Mill, for the Berkshire Cotton Mfg. Co., North Adams, Mass.
15,000 Spindle Mill, for the Home Cotton Mills Co., St. Louis, Mo.
Warehouse for the Bemis Bros. Bag Co., St. Louis, Mo.
10,000-bushel Distillery, the largest in the world, for the Indiana Distilling Co., Terre Haute, Ind.
Two Cotton Warehouses, each 200 x 250 feet, for the Pelzer Mfg. Co., Pelzer, S. C.
Cattle Barns, capacity 2,500 head, for the Indiana Distilling Co., Terre Haute, Ind.

500,000-bushel Storage Elevator for the Riverside Malt & Elevator Co., Riverside, Cincinnati, O.
150,000-bushel Elevator for the Indiana Distilling Co., Terre Haute, Ind.

BUILDINGS:

Cotton Compress Warehouse, 108 x 310 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.
Freight Station for the Baltimore & Ohio Southwestern R'y Co., Brighton, Cincinnati, Ohio.

Foundations for the large Train Shed, for the New York Central & Hudson River R. R. Co., at Syracuse, N. Y.
25,000 Spindle Mill, for the Dwight Mfg. Co., Alabama City, Ala.
Four-story Bag Factory, for the Gulf Bag Company, New Orleans, La.
Six-story Office Building, for J. W. Warner, Syracuse, N. Y.
Sugar Mill, 120 x 650 feet, four stories, for the Gramercy Sugar Mill Co., Gramercy, La.
U. S. Bonded Warehouse, 110 x 250 feet, for the Indiana Distilling Co., Terre Haute, Ind.
Hogan Warehouse Building, Syracuse, N. Y.



WILHELM GRIESSER

ENGINEERING
COMPANY . .

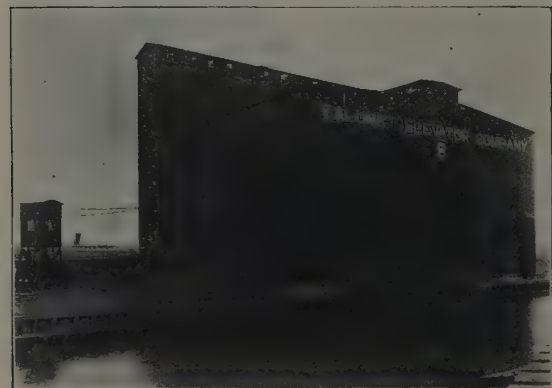
Designers and Builders of

Elevators, Breweries, Malt Houses,
Distilleries and Machinery.

Patentee and maker of the Grain
Dryer "America," Direct Supporting
Cellar Construction, Steep-Tank and
Mash-Tub Valves.

907-911 Schiller Building, Chicago.

Honstain Bros., CONTRACTORS AND BUILDERS OF Grain Elevators.



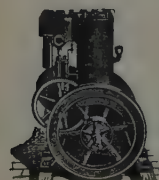
Estimates furnished on application for Transfer, Mixing and Storage Elevators.

We invite inspection of our designs and solicit correspondence respecting the construction of Grain Elevators. We keep a full line of Mill and Elevator Supplies.

WE REFER TO THE FOLLOWING WORK WHICH WE HAVE DONE:

Nebraska City & Ill. Ele. Co., Chicago,	2,000,000	Interstate Grain Co., Minneapolis,	500,000
Bartlett Frazier Co., "	1,000,000	City Elevator Co., "	400,000
H. Rogers Co., St. Louis,	500,000	Security Grain Co., "	400,000
P. H. Peavey & Co., Minneapolis,	1,000,000	Royal Milling Co., Great Falls, Mont.,	100,000
S. S. Linton & Co., "	650,000	Jennison Bros., Janesville, Minn.,	100,000
S. S. Linton & Co., "	450,000	400 Country Elevators, from	10,000 to 50,000

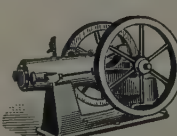
313 Third Street South, - Minneapolis, Minn.



Prouty Electro-Gasoline Engine.

Has no equal for Shops, Factories, Dynamoes, Hoisting, Pumping, Mills, Boats, Printing Offices, Tractions, Road Wagons.
Built in sizes from 2 to 50 Horse Power.

THE PROUTY CO.,
334 Dearborn St., Chicago, Ill.



CASOLINE ENGINES

Are the best and cheapest power for Elevators, Conveyors, Feed Mills, Corn Shellers, Etc.

Catalogue Free.
The Van Duzen Gasoline Engine Co.,
CINCINNATI, OHIO.

D.A. ROBINSON

Main Office: Auditorium Annex, Chicago.

Construction Office: Great Northern Elevator A 2, Minneapolis, Minn.



Designer and Builder of

GRAIN ELEVATORS, MALT HOUSES

And all Kinds of Heavy Construction.

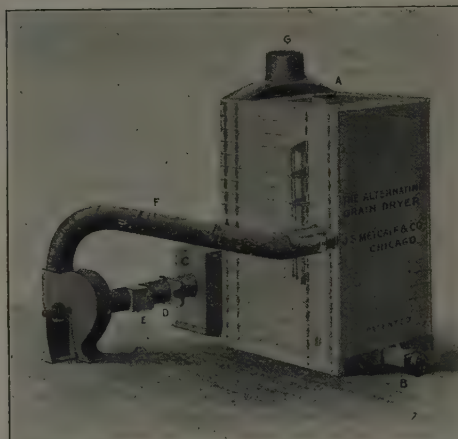
Patent System of Independent
Leg Rope Drive.

Patent Double-Jointed
Distributing Spouts.

Patent Automatic
Grain Belt Tripper.

A PERFECT GRAIN DRYER.

Wet or Damaged Grain Restored to Grade.



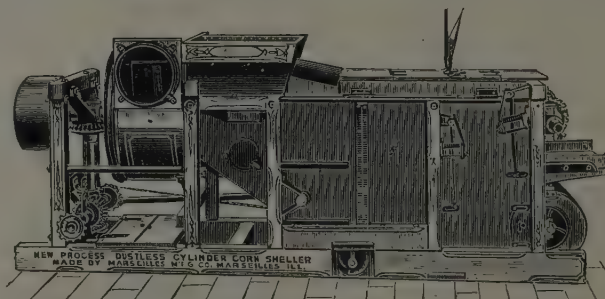
WRITE FOR DESCRIPTIVE CIRCULAR.

JOHN S. METCALF & CO.,

Engineers,
Grain Elevator Builders,

1075 WEST 15TH STREET, - - CHICAGO.

The New Process Warehouse Corn Sheller.



Something New

The
Latest
Improvements

Specially built for
the Elevator and
Grain Trade.

A NEW PROCESS OF SHELLING CORN.

Some of the special features are: An Adjustable Cylinder, White Iron Shelling Parts, Spiral Shelling Head, Double Suction and Blast Fans, Positive Screw Feed, no Clogging, no Grinding of Corn, Cobs Left in Good Shape for Fuel, no Waste of Grain or Power. Address

MARSEILLES MFG. CO., MARSEILLES, ILL.

TROMANHAUSER BROS.,

ARCHITECTS, CONTRACTORS, AND BUILDERS OF

GRAIN ELEVATORS.



COUNTRY,
TRANSFER,
MIXING,
MARINE,
AND
TERMINAL
STORAGE
ELEVATOR
PLANTS.

Plans Submitted and Estimates Furnished.

316 New York Life Building, - - MINNEAPOLIS, MINN.



WHEN YOU WANT
Elevator or Mill
Supplies,

Cleaning Machines,
Feed Mills,
Corn Shellers,
Engines and Boilers,
Gasoline Engines,
Horse Powers,
WRITE TO

GREAT WESTERN MANUFACTURING CO.

General Office and Factory, LEAVENWORTH, KAN.

Warehouse and Salesrooms, 1221-1223 Union Ave., KANSAS CITY, MO.

SEND FOR OUR ILLUSTRATED CATALOGUE.

The Heidenreich Construction Co.,
ENGINEERS AND GENERAL CONTRACTORS,

Designers and
Builders of

GRAIN ELEVATORS

Of Any Capacity.

MALT HOUSES AND BREWERIES.

541 The Rookery: - - - Chicago, Ill.

THE B. S. CONSTANT COMPANY,

Designer and Builder of

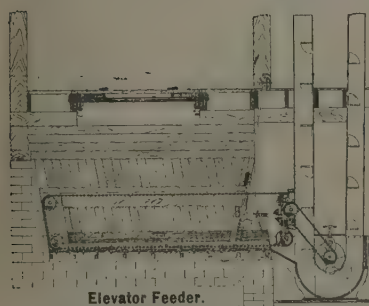
GRAIN ELEVATORS.

MANUFACTURER OF

Grain Cleaning Machinery
FOR ELEVATORS AND MILLS.

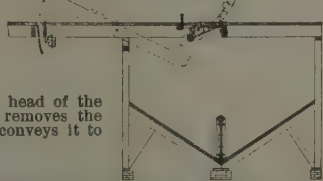
Seed and Farm Fanning Mills.

Automatic Self-Feeding Ear Corn Elevator
Boot and Sheller Feeder.



Elevator Feeder.

Our Elevator Cleaner collects all dust at the head of the elevator before the grain reaches the bins. It also removes the loose silk, shucks and snow out of ear corn and conveys it to the dust room. Correspondence Solicited.



Dump and Rear End of Feeder.

S. W. Cor. Douglas & Prairie Sts., - BLOOMINGTON, ILL.

Macdonald Engineering Company,

CONTRACTING ENGINEERS,

Builders and Designers of

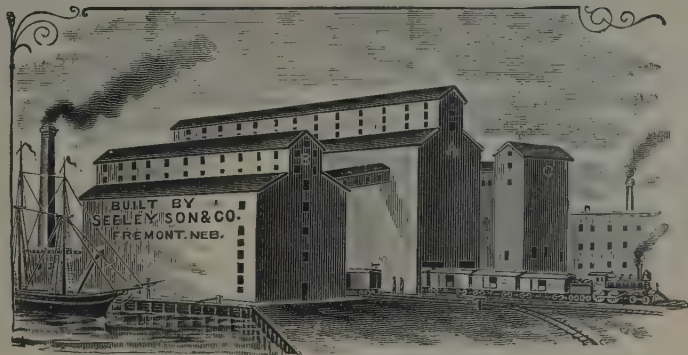
GRAIN ELEVATORS

Any Capacity.

1454, 1455 and 1456 Monadnock Block, Chicago, Ill.

SEELEY, SON & CO.,

Fremont, Neb.



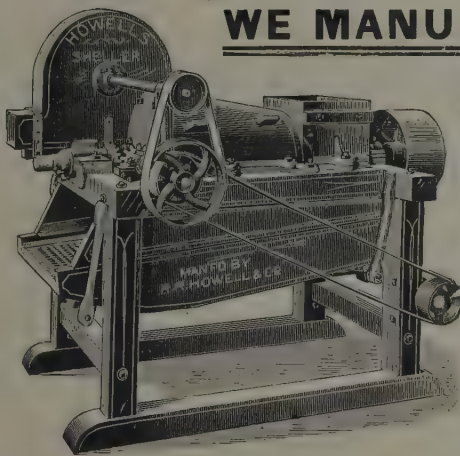
Architects and Builders

OF ALL KINDS OF

GRAIN ELEVATORS.

WE MANUFACTURE

EVERYTHING

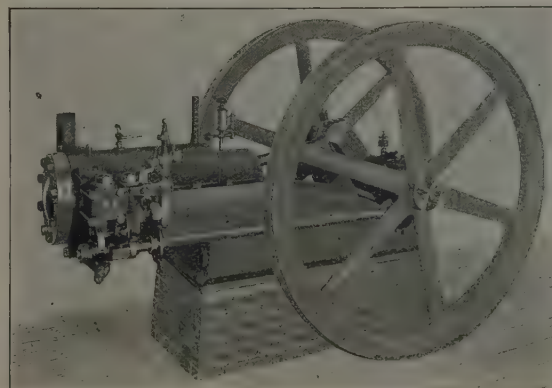


Pertaining to Grain Elevators, including Roller Feed Mills, Power Corn Shellers, Crane Single and Double Gear Elevator Horse Power, the Minneapolis Horse Power, Engines, Boilers, Car Pullers, Power Grain Shovels, Elevator Boots, Grain Spouts, Pulleys, Shafting, Hangers, Boxes, Couplings, Link Chain, etc., etc.

Write for prices direct to the manufacturers,

R. R. HOWELL & Co., MINNEAPOLIS, MINN.

"NEW ERA" GASOLINE ENGINE.



Easy to Start.

Easy to Operate.

Vertical Poppet
Valves.

Electric or Tube
Igniter.

Any working part removed for cleaning or repairing without disturbing other parts.

Heavy and substantial.
First class throughout.

Thoroughly
Guaranteed.

Sizes 10 to 60 H. P.

For Catalogue and Prices address

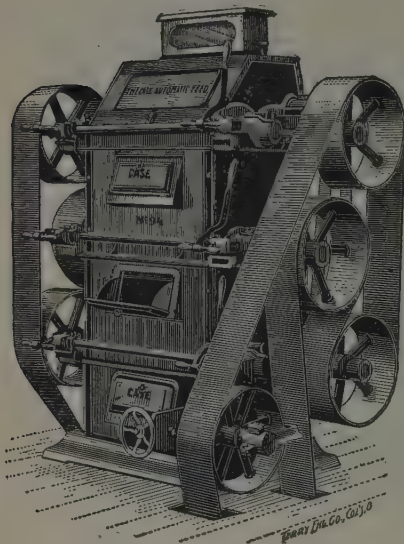
NEW ERA IRON WORKS, 30 WAYNE AVE., DAYTON, OHIO.

Elevator Men,

Who put in a **ROLLER FEED MILL** last season, found it a profitable investment. Some Roller Feed Mills put in by elevator men have more than paid for themselves in one season. The demand for ground feed during the coming season promises to be even greater than during the last.

The Case Three-Pair High Corn and Feed Roller Mills

Are made in four sizes, and always do perfect work.



ONTARIO, IND., April 8, 1895.

The Case Manufacturing Co.,
Columbus, Ohio.

DEAR SIR:—We have the 9x18 Three-High roll running, and it is the best Feed Roll that I ever handled or saw. We can grind 60 to 65 bushels per hour with less than half the power that we used with the old stone.

She is a daisy. We have smiles all over our faces like a full moon. Now, if you want a statement regarding the roll, let me know, and will write you a good one. Everything all O. K.

Yours respectfully,
M. S. MILLER.

We Keep a Full Line of
**ELEVATOR AND MILL SUPPLIES
AND MACHINERY.**

Grain Cleaners, Corn Shellers, Corn Cleaners and Scourers.

CORN MEAL BOLTS.

WRITE US FOR PRICES BEFORE BUYING.

THE CASE MFG. CO., COLUMBUS, OHIO.

THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS.

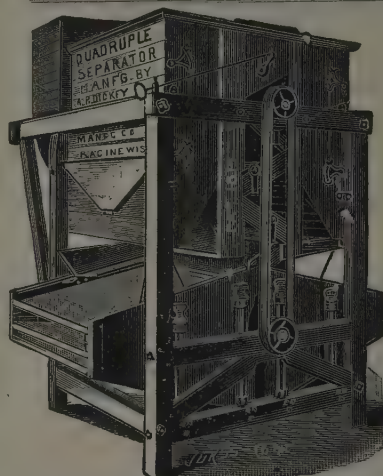
Over-Blast Suction Separator.

THE
STANDARD
IN THEIR
LINE.



“Grain
Cleaned
to a
Standstill.”

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.



The Quadruple Suction Dustless Separator, Four separate suction, independent of each other, with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

For CIRCULARS and PRICES address

A. P. Dickey Mfg. Co.
RACINE, WIS.

THE CONTINENTAL HOTEL

IS THE ONLY FIRST CLASS HOTEL IN THE IMMEDIATE BUSINESS AND AMUSEMENT CENTER OF THE CITY CONDUCTED ON THE
AMERICAN PLAN AT \$2.00 PER DAY
STEAM HEAT, PASSENGER ELEVATOR
AND OTHER MODERN CONVENIENCES.

TABLE AND SERVICE THE BEST
ROOMS NEWLY AND NEATLY FURNISHED. THE NEXT TIME YOU ARE IN CHICAGO TRY
THE CONTINENTAL, YOU WILL FIND IT HOMELIKE AND COMFORTABLE.

CHAS. O. BLOOM

PROPRIETOR



WABASH AVENUE AND MADISON STREET.

CHICAGO, ILL.

SEEDS

THE ALBERT DICKINSON CO.

Timothy, Clovers, Flax, Hungarian, Millets, Red Top, Blue Grass,
Lawn Grass, Orchard Grass, Bird Seeds, Ensilage Corn,
Pop Corn, Buckwheat, Field Peas, etc.

OFFICES, COR. CLARK & SIXTEENTH STS., CHICAGO, ILL.

THE SMITH PNEUMATIC TRANSFER AND STEEL STORAGE SYSTEM.

*Now in Successful Operation
at Toledo, Ohio.*

This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

It was on exhibition at the World's Columbian Exposition of 1893, and was awarded four highest medals and diplomas and received in addition thereto the highest indorsement of the principal officers of the Exposition as well as of the highest authorities in all industries to which it is applicable.

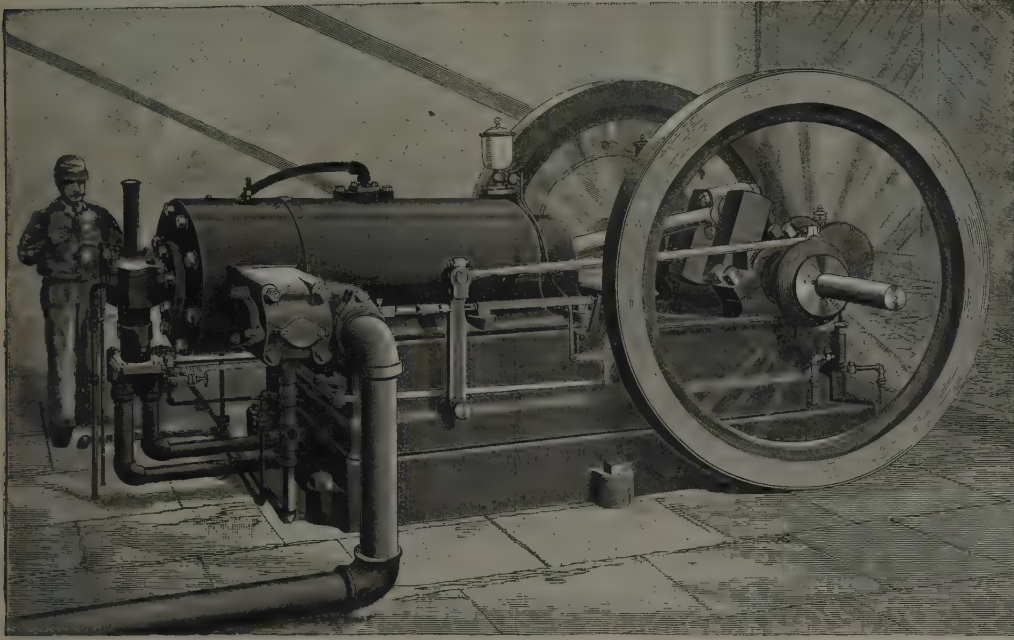
The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

The policy of the Company in regard to the introduction of its system is to make such liberal and easy terms with all who desire to use it that there will be no cause for complaint.

Full particulars furnished on application in person or by letter to

The Smith Pneumatic Transfer & Storage Co.,
1327 Manhattan Building,
315 DEARBORN ST., CHICAGO.

30 ACTUAL HORSE-POWER CALDWELL-CHARTER GASOLINE ENGINE....



WE have in stock a 30 h.-p. Caldwell-Charter Gasoline Engine with self-starting device, which is in first-class condition, which we will be glad to sell at an especially low price, as we are in need of the room it occupies and do not usually carry this size in stock. This engine is of the very best design, and the material and workmanship are first-class in every particular. It is a heavy machine, running at a slow speed compared with other gasoline engines, and will prove a very durable and substantial engine. To anyone having need of an engine of this size we shall be pleased to name a low price for immediate acceptance.

H. W. CALDWELL & SON CO.,

Manufacturers of Caldwell Conveyor, Grain Elevator
Supplies and General Machinery,

127-133 West Washington Street,
CHICAGO, ILL.

CUT OUT, FILL IN AND MAIL TO SECRETARY W. H. CHAMBERS, DES MOINES, IOWA.

(SEE OTHER SIDE.)

APPLICATION FOR MEMBERSHIP.

W. H. CHAMBERS,

Secretary of the Grain Dealers' National Association,

DES MOINES, IOWA

189

SIR:—

.....hereby make application for Membership in THE GRAIN DEALERS' NATIONAL ASSOCIATION OF THE UNITED STATES, in accordance with the rules and regulations governing the Association, and to which I have subscribed on the back of this Application, and enclose herewith the membership fee of \$10.00.

Firm Name

City or Town

County

State

Number of Elevators.....

Located

At

At

At

At

At

At

At

At

THE "OTTO" GASOLINE ENGINE, SIMPLEST CHEAPEST BEST POWER FOR . . . Grain Elevators, Flour and Feed Mills, Water Works, Electric Light Stations.

The Otto Gas Engine Works, }
33d & Walnut Sts., PHILADELPHIA, PA.

OFFICES: { 245 Lake Street, CHICAGO.
321 S. 15th Street, OMAHA.
212 Nicollet Avenue, MINNEAPOLIS.
35 E. Ohio Street, INDIANAPOLIS.

CUT OUT, SIGN AND MAIL TO SECRETARY W. H. CHAMBERS, DES MOINES, IOWA.

(SEE OTHER SIDE.)

CONSTITUTION AND BY-LAWS OF THE GRAIN DEALERS' NATIONAL ASSOCIATION.

Adopted at Chicago, November 9, 1896.

CONSTITUTION AND BY-LAWS.

PREAMBLE.

We, the undersigned, being regularly engaged in the buying and selling of grain, and recognizing the necessity of a National Association of Grain Dealers, do hereby associate ourselves in an organization, the object of which shall be the advancement and protection of the common interests of those who are regularly engaged in the grain business, the formulating of rules to govern the transaction of business and the promotion of friendly relations among legitimate grain men of the country.

CONSTITUTION.

ARTICLE I.—NAME.

Section 1. The name of this organization shall be The Grain Dealers' National Association.

ARTICLE II.—MEMBERSHIP.

Section 1. Any person, firm or corporation operating a grain elevator and engaging in the buying and selling of grain continuously, may become a member of this Association; also, any person, firm or corporation who has been engaged in the buying and selling of grain continuously at one station for at least 2 years, yet has no elevator, may, upon the recommendation of two persons or firms who are members of this Association in good standing, and are operating grain elevators at the same or nearby stations, be admitted to membership.

Sec. 2. Regular grain receivers and regular track buyers, who do not sell grain for, or send bids to, or buy grain from grain scalpers, irregular grain dealers, transient buyers or "scoop-shovel men," may be admitted to honorary membership upon the payment of the regular membership fees.

Sec. 3. No person, firm or corporation shall be admitted to membership in this Association unless he or it shall receive the full vote of the Board of Directors, and shall subscribe to this constitution and by-laws.

ARTICLE III.—OFFICERS.

Section 1. The officers of this Association shall consist of president, first vice-president, second vice-president, a treasurer and a secretary, and a board of directors consisting of the president, the secretary and five members of the Association.

Sec. 2. In case a vacancy occurs in the Board of Directors between meetings, the President shall appoint a successor for the balance of the term of office.

ARTICLE IV.—DUTIES OF OFFICERS.

Section 1. It shall be the duty of the President to preside at all meetings of the Association, and at all meetings of the Board of Directors, and to sign all orders drawn on the Treasurer by the Secretary.

Sec. 2. In the absence of the President, the First Vice-President shall preside at all meetings of the Association.

and in the absence of both, the Second Vice-President shall preside.

Sec. 3. It shall be the duty of the Secretary to record and preserve all minutes of meetings of the Association, conduct correspondence and issue notices of meetings to each member. He shall make a report at each annual meeting, keep members posted on what is being done between meetings, and perform such other duties as may be required by the Board of Directors.

Sec. 4. It shall be the duty of the Treasurer to collect all fees and dues, have charge of all moneys of the Association, and pay out money only upon orders signed by the President and Secretary. He shall report the state of the finances at each regular meeting of the Association.

ARTICLE V.—FEES AND DUES.

Section 1. The membership fee of the Association shall be \$10, which shall accompany each application for membership.

Sec. 2. The annual dues shall be \$5, more or less, according as the Association shall decide at the annual meeting, payable on the first of each year. Members who have more than one house shall pay in addition to the annual dues, an annual fee of \$1 each for first 10 houses; a fee of seventy-five cents for each house in excess of 10 and not over 30, and a fee of fifty cents each for each house in excess of 30.

ARTICLE VI.—AMENDMENTS.

Section 1. This constitution may be amended at any annual meeting of the Association, by an affirmative vote of two-thirds of the members present. Notices of proposed amendments must be mailed to each member at least thirty days prior to the annual meeting.

BY-LAWS.

ARTICLE I.—MEETINGS.

Section 1. There shall be annual meetings of this Association, subject to the call of the Board of Directors.

Sec. 2. A quorum shall consist of 50 members, who shall be represented by person or proxy.

Sec. 3. The Board of Directors shall meet quarterly, at such time and place as they may decide upon.

ARTICLE II.—ELECTION OF OFFICERS.

Section 1. Officers shall be elected, by ballot, at each annual meeting, and hold their offices for one year, or until their successors are duly elected and have qualified.

ARTICLE III.—EXPENSES OF OFFICERS.

Section 1. The traveling and hotel expenses of all officers at regular and special meetings shall be paid by the Association.

Sec. 2. The Secretary shall receive a salary of \$1,000 per year.

Sec. 3. The Treasurer shall give bonds in the sum of \$5,000.

ARTICLE IV.—APPLICATIONS FOR MEMBERSHIP.

Section 1. Applications for membership accompanied by the membership fee shall be made to the Secretary and turned over to the Board of Directors. Each applicant must be recommended by two members in good standing, and the applicant shall become a member upon receiving the unanimous vote of the Board of Directors, and subscribing to the Constitution and By-laws. If the applicant is not elected a member, his membership fee shall be returned to him.

ARTICLE V.—STANDING COMMITTEES.

Section 1. The Board of Directors shall act as an executive committee.

Sec. 2. There shall be a standing Committee on Transportation consisting of five members, appointed by the President at each annual meeting.

Sec. 3. The Secretary or complaining member shall refer to the Board of Directors all matters needing adjustment, such as discrimination in freight rates, shortages, dishonest returns, or other grievance between any member and railroad, consignee, or others.

Sec. 4. The Board of Directors shall make a thorough investigation of all complaints, attempt to secure settlement of same and report every case to the Association.

ARTICLE VI.—DUTIES OF MEMBERS.

Section 1. The name of any member of this Association who has not paid his annual dues shall, after due notice, be stricken from the roll of membership.

Sec. 2. It shall be the duty of members to aid in protecting the interests of every member of the Association.

Sec. 3. Members of this Association shall not buy grain at any station where they are not regularly doing business and where there is a regular buyer who is a member of this Association without the consent of such buyer.

Sec. 4. So far as lies in their power, members of this Association shall not transact business with irregular dealers; with parties against whom unfairness is proved; with receivers who patronize irregular dealers, or with those who solicit grain from farmers or irregular dealers.

Sec. 5. It shall be the duty of every member of this Association who learns of any commission firm, receiver or track buyer soliciting or encouraging shipments from farmers or irregular dealers, to report the name of said commission firm or receiver, together with the facts in the case, to the Secretary, who shall record the same in a book kept for that purpose, and he shall immediately notify each member of this Association.

ARTICLE VII.—AMENDMENTS.

Section 1. These by-laws may be amended by a majority vote of those present at a regular meeting. Formal notices of proposed amendments must be mailed to members at least thirty days prior to the meeting.

We hereby subscribe to the foregoing constitution and by-laws and agree to give the association our hearty support.

Recommended by

Address


Important Decision by the Supreme Court of the State of New York, IN FAVOR OF THE S. HOWES COMPANY, affirming its exclusive right, as against any other corporation or company, to the use of the name "HOWES" in the manufacture and sale of grain cleaning machinery, as the successor to the business originally founded by the late Simeon Howes.

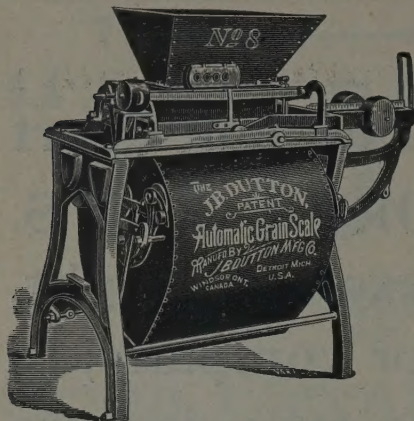
Some of the persons who had formerly been in the employ of the S. Howes Company organized a new company and began business under the name of "The Howes Grain Cleaner Company." The Supreme Court, upon application of "The S. Howes Company," and after hearing affidavits and counsel of both the plaintiff and defendants, granted an injunction order which enjoins and restrains the defendants, The Howes Grain Cleaner Company, Charles N. Howes, Elgin Keith, Chauncey A. Lamphere and Jasper N. Bacon, from advertising the business of manufacturing or selling any grain cleaning machinery under any name embracing the words, "Howes" and "Grain Cleaner," or the words "Howes Grain Cleaner" and "Company," or the words "Howes Manufacturing Company," or "Howes Company," or "Howes Grain Company," or any similar words, and from selling or delivering any machinery manufactured by "The Howes Grain Cleaner Company," and from in any manner representing or holding themselves out to be the same concern as The S. Howes Company, or that The Howes Grain Cleaner Company, or the defendants or either of them, are the successor or successors to the business heretofore carried on by Simeon Howes, or by Simeon Howes and any other person or persons associated with him in business during his lifetime in the manufacture of grain cleaner machinery; excepting, however, that The Howes Grain Cleaner Company may sell and transfer by a single transfer its entire property; and except it may make deliveries of machinery which had been manufactured and sold by it, or for which it had accepted orders before the service of the original injunction order. This service was made December 31, 1896.

In justice to ourselves, owing to misrepresentations made by some of our competitors, we wish to say that Mr. L. E. Barbeau, of Silver Creek, N. Y., president of the company, has been constantly connected with the company and its predecessors for over 27 years, and has done a great deal toward the introduction of American mill machinery, particularly grain cleaning machinery, in countries abroad. Mr. Barbeau, in addition to his connection with The S. Howes Company, is largely interested in other properties in the United States.

Successors to
Howes, Babcock & Co.,
Howes, Babcock & Ewell,
Howes & Ewell,
S. Howes,

The S. Howes Company.

 L. E. BARBEAU, President.



J. B. DUTTON'S Patent Automatic Grain Scale.

FOR USE IN

ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.

ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL.

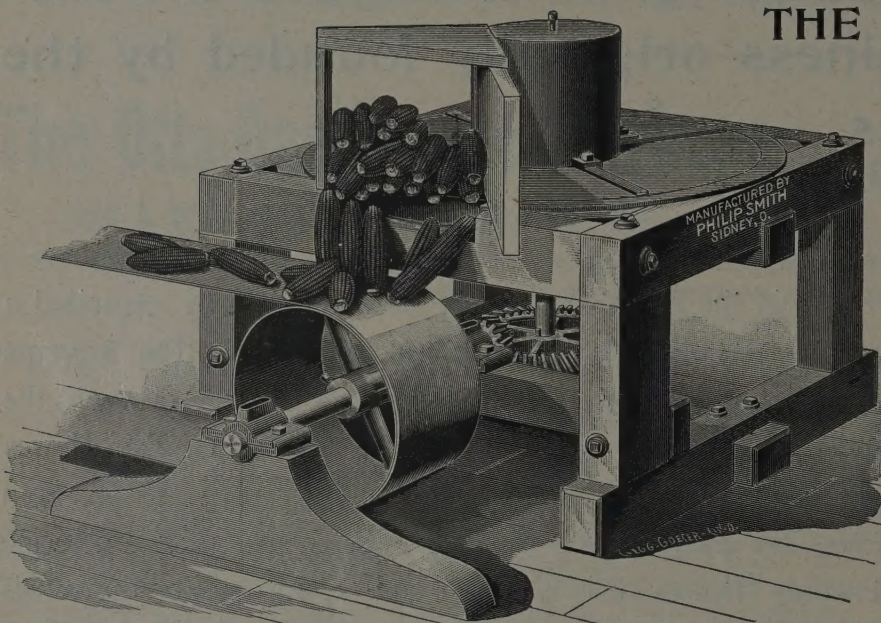
SEND FOR CIRCULAR AND PRICE LIST.

Address

J. B. DUTTON, 1026 and 1028 Scotten Ave., DETROIT, MICH.

THE MARQUIS PATENT

EAR CORN ELEVATOR AND SHELLER FEEDER.



THIS Feeder will feed corn from the dump to the elevator or sheller either with or without drag belt. Will feed 100 to 1,500 * bushels per hour without any attention. Can be regulated to the capacity of the sheller or elevator while in operation. Can be made to feed to either sheller or elevator by changing reverse board. It is made of iron and is very durable. It will last a life time. Can be applied to dumps now in use at very little expense. We have over 5,000 of these machines in use that are giving universal satisfaction.

Warehouse and Elevator Machinery of All Kinds.
Discounts furnished on application.

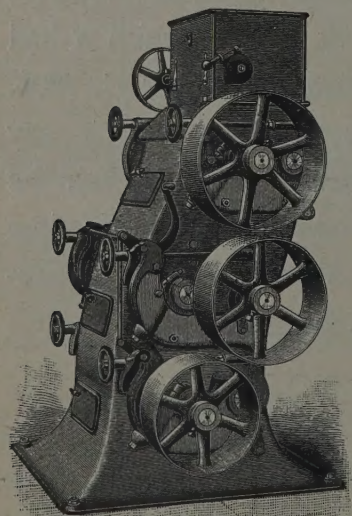
PHILIP SMITH, SIDNEY, OHIO.

NORDYKE & MARMON CO., Indianapolis, Ind.,

FLOUR, CORN AND ELEVATOR MACHINERY.

QUALITY TO SUIT THE MOST EXACTING,

PRICES TO SUIT THE TIMES.

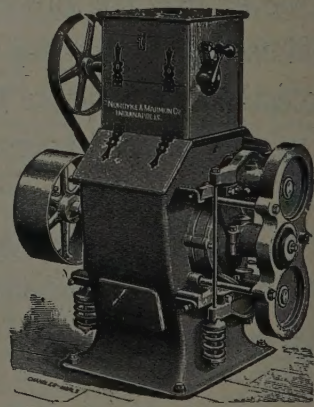


Three Pair High Six Roller Mill.

Corn Shellers,
Grain Cleaners,
Flour and Bran Packers,
Flour Feeders and Mixers,
Portable Buhr Mills,
Hominy Mills,
Wheat Heaters,
Scales,
Shafting,
Pulleys,

Elevator Supplies.

Hangers,
Boxes,
Gearing
Belting,
Steel Conveyors,
Wood Conveyors,
Link Belt,
Sprocket Wheels,
Engines and Boilers,
Water Wheels,



Three Roll Two-Break Corn and Feed Mill.

TEN SIZES and STYLES of ROLLER, CORN and FEED MILLS

No doubt about the volume of our voice if price and merit talk, and what we say will be interesting if you intend to buy.

WRITE US, SAYING WHAT YOU WANT.

NORDYKE & MARMON CO., - INDIANAPOLIS, IND.

Invincible

Grain Cleaner Co.,

OF SILVER CREEK, N. Y.

.....

THIS company has been organized to make and supply immediately any of the "Invincible" Grain Cleaning Machines, Flour Packers, etc., heretofore advertised by the Howes Grain Cleaner Co. of Silver Creek, N. Y. The large and constantly increasing sale of these machines, while but the legitimate result of their superiority, has aroused the envy of a competing firm, The S. Howes Co. of this place, who have made an attempt to throw an obstacle into the way of the "Invincible" by suing for an injunction restraining the Howes Grain Cleaner Co. from advertising their product or soliciting orders for the same—on the ground that the appearance of the name "Howes" invaded some alleged rights of the S. Howes Co. As a legal controversy, once begun, can easily be elongated to suit any litigant, a new company has been formed that is ready to fill orders as fast as they are sent in for any of the full line of "Invincible" machines. It should be distinctly understood that the right of this company to manufacture and sell such machines is not questioned by anyone, and that the aforesaid legal proceedings are directed solely against the use of the name "Howes" in connection with the corporate name, "The Howes Grain Cleaner Co.," in the sale of "Invincible" machines.

Incidentally it may be stated as a fact, that Mr. C. N. Howes, who was at the head of The Howes Grain Cleaner Co., has been connected with the manufacture of grain cleaning machines for more than a quarter of a century, while no one of the same name is a member of the S. Howes Company; and the management of The Invincible Grain Cleaner Company will be the same as was that of The Howes Grain Cleaner Company.

The company hereto subscribed will at all events demonstrate in an unmistakable manner that the "Invincible" machines have come to the front on their intrinsic merits and that they will stay just where they belong—that is, at the head of the procession.

Millers and elevators owners who have had the opportunity for comparison need no assurances on our part, but anyone contemplating the purchase of one or more machines should write for description and prices and he will find them right. Respectfully,

The Invincible Grain Cleaner Company,

INVINCIBLE WORKS,

SILVER CREEK, NEW YORK.

Write Us for Prices . . .



ON THE BEST **FEED GRINDERS.**
ON **OAT CLIPPERS**

That will clip oats with a profit. On anything you may need in the machinery line. Prices based on gold. Silver accepted at par.

CHAS. KAESTNER & CO.,

Machinists, Founders and Mill Furnishers,

241-249 South Jefferson Street, - Chicago, Ill.

Ask for Circular "K."

ALL GOODS SOLD BY US GUARANTEED.

Quality

Roofing, Siding, Ceiling,
Metallic Lath, etc.

When a man talks price to you,
Ask him about Quality.
When a man talks quantity to you,
Ask him about Quality.
When a man talks merit to you,
Ask him about Quality.

"THAT'S OUR STRONGHOLD."

WRITE

THE CINCINNATI COR. COMPANY,
Box 369, PIQUA, O.

An Offer to Hay and Grain Men

THE AMERICAN ELEVATOR AND
GRAIN TRADE,

THE HAY TRADE JOURNAL AND
DIRECTORY,

\$1.00 per year.

MONTHLY.

\$2.00 per year.

WEEKLY.

BOTH FOR \$2.00.

ADDRESS EITHER

The Hay Trade Journal, OR Mitchell Bros. Co.,
Canajoharie, N. Y. 184 and 186 Dearborn St., Chicago, Ill.

BISULPHIDE OF CARBON,

Of Special Grade for Killing Insects in Warehouses, Etc.

Send for Instructions and Order Direct from
the Manufacturer,

EDWARD R. TAYLOR,

CLEVELAND, OHIO

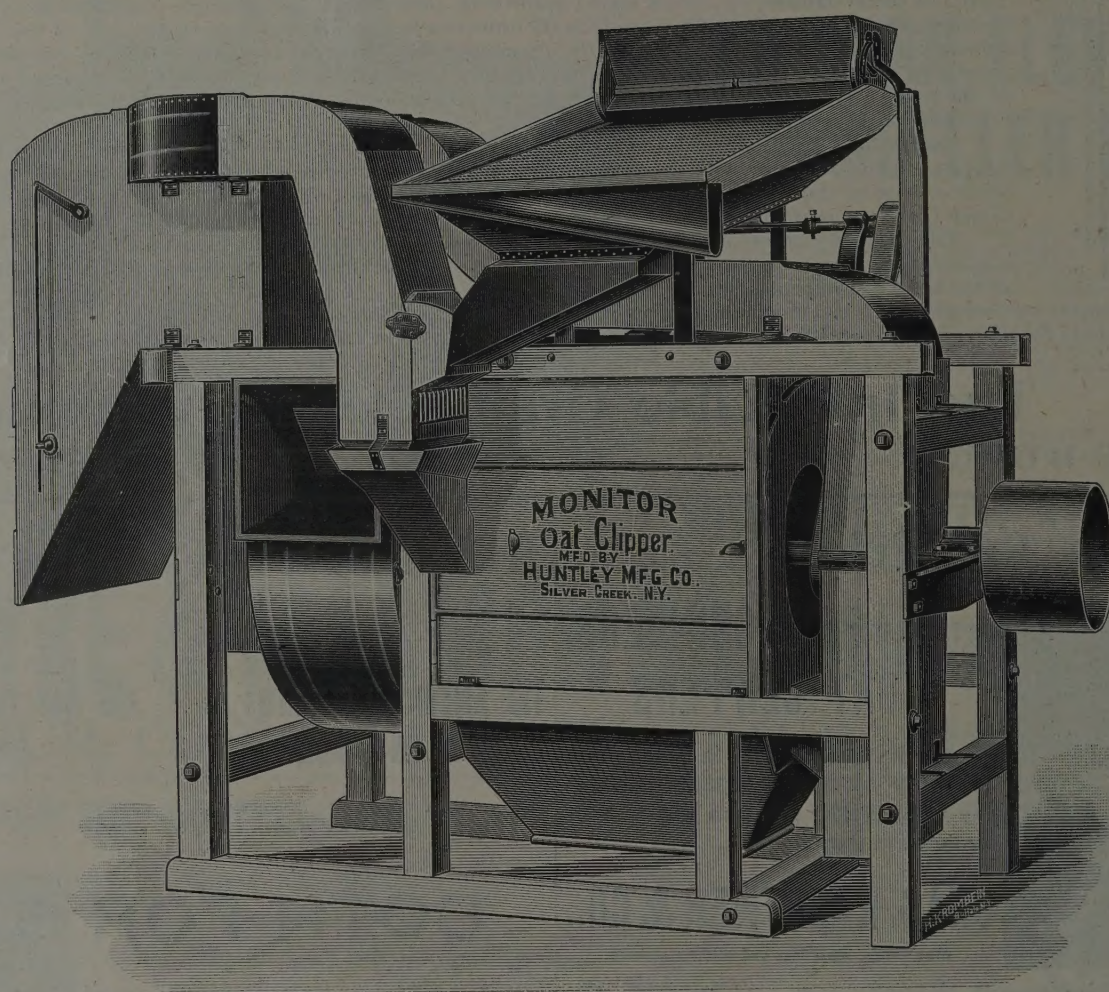
SEEDS

Grain, Clover and Grass Seeds,
CHAS. E. PRUNTY,
MAIN & MARKET SAINT LOUIS.

OAT CLIPPERS

THE MONITOR

Built on Honor. Sold on Merit.



In use in many prominent elevators, and highly indorsed by every user.

CAPACITY FROM 50 TO 1,200 BUSHEL PER HOUR.

Monitor Grain Cleaners

Continue in the lead. No competition when it comes to high-grade work. ❀❀

HUNTLEY MFG. CO.,

=

Silver Creek, N. Y.